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EMERGENCY MEDICAL RESPONSE

CAPABILITY ANALYSIS

by

Charles G. Anderson

FINAL REPORT

for

FEDERAL EMERGENCY MANAGEMENT AGENCY  
WASHINGTON, D.C. 20472

FEMA AWARD NUMBER EMW-C-0755

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JULY 1982

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ASSOCIATED RESEARCH ANALYSIS CORPORATION

Suite 414, 10560 Main Street  
Fairfax, Virginia 22030

(703) 385-2920

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## I. SUMMARY

The objective of this study is to assess the current capacity of government to cope with the health and medical aspects of national crisis situations and to identify specific areas of research required to enhance the government's capacity to respond. In addition to the review of available documentation, the study process involved extensive face-to-face interviews with both government and private sector health professionals.

The report includes a description of health mobilization planning activity from the early 1950's to the present, the current mobilization preparedness in terms of responsibilities and the current mobilization availability of resources. The report also includes a series of recommended health mobilization activities and outlines specific study requirements in support of health mobilization planning.

The essential findings of the study are that:

- o Federal health/medical resources are extremely limited and the response to the medical aspects of a major national crisis would primarily involve the coordination and allocation of privately controlled manpower, facilities and supplies.
- o Due to an inadequate data base and the lack of an in place management mechanism in the sense of a national health disaster response plan, the Federal Government is currently unable to effectively coordinate the medical aspects of the national response to a major crisis.
- o Health disaster planning at all levels of government has declined steadily since the late 1960's.
- o Enhancement of national emergency medical response capability will require a variety of study efforts to support the substantial level of advanced planning that is required.

## II. METHODOLOGY

Information on the evolution of civilian health mobilization was extracted from a variety of PHS working documents and program reports. The data presented in the appendix and in Section IV, "Current Civilian Health Preparedness" was collected in an extensive series of direct face-to-face interviews with representatives of the following groups:

Federal Emergency Management Agency

United States Public Health Service

- Office of Management
- Health Services Administration
- Health Resource Administration
- Alcohol, Drug and Mental Health Administration
- Centers for Disease Control

Veterans Administration

Department of Defense

- Department of Army
- Department of Navy
- Department of Air Force
- Defense Personnel Support Center

Department of Commerce

American Medical Association

American Hospital Association

American Pharmaceutical Association

American Hospital Supply Corporation

International Marketing Service

Information on Disaster Health Preparedness at the regional and state level was developed through telephone interview with PHS regional disaster coordinators and state health officers.

Mobilization planning recommendations and the study requirements covered in Sections V and VI are based on an analysis of the above interview process and an in-depth review of available documentation.

### III. EVOLUTION OF CIVILIAN HEALTH MOBILIZATION

#### A. Initial Activities

During the period just after World War II, the primary basis for civil defense was legislation enacted between 1947 and 1950--i.e., the National Security Act, the Defense Production Act, and the Federal Civil Defense Act.

The organizational changes resulting from this early legislation were attributed to the changes in warfare technology. The advent of nuclear weapons, fallout, and the possibility of bacteriological and chemical warfare required new approaches to the defense of the continental United States. The necessity for a medical stockpile was recognized.

Early on, the Public Health Service expressed concern for and initiated non-military defense health activities. These actions preceded the passage of the Federal Civil Defense Act in 1950.

The significance of health and welfare in civil defense was indicated by the fact that the first delegation of responsibility under the Act was made to DHEW, approved by the President in 1954. Shortly thereafter, a program was formulated to help meet the demand for emergency public health services. The program was three-fold in nature:

- o Planning and program development
- o Recruitment and training
- o Research and development.

Emphasis was placed on programs for establishing a nationwide network of health and related resources which could be mobilized rapidly in the event of an attack.

Beginning in 1950, after the establishment of the Federal Civil Defense Administration, there was a growing awareness of the necessity to strengthen local capabilities for coping with large scale disasters. By the mid 1950's a medical stockpile program was developed. By the end of FY 1957, a total of \$205 million had been expended for medical supplies and equipment for stockpiling. At that time most of the materials were stored in a network of 32 Federal depots located throughout the nation.

Following the merger of the Federal Civil Defense Administration and the Office of Defense Mobilization, the Office of Civil and Defense Mobilization was formed and was delegated the responsibility for the stockpile program. From May 1959 to August 1961, under agreement with the Office of Civil and Defense Mobilization, the management functions were performed by the Division of Health Mobilization in the Bureau of State Services, Public Health Service, DHEW. The entire program was funded during this period through the budget of the Office of Civil Defense Mobilization.

B. The Division of Health Mobilization

Executive Order 10958, on August 14, 1961 gave DHEW the full responsibility for the development of requirements, plans, and operating procedures for the emergency medical stockpile program. The Division of Health Mobilization (DHM) in the Public Health Service was the designated component within DHEW to carry out the responsibility.

On February 20, 1962, Executive Order 11001 was issued and directed the Secretary of DHEW to prepare national emergency plans and to develop preparedness programs covering health services, civilian health manpower, health resources, welfare services, and education. The Division of Health Mobilization was delegated the responsibility of fulfilling these functions in compliance with this Executive Order and, therefore, became the Federal focal point in coordinating the efforts to develop emergency health plans and preparedness programs. This involved all Civil Defense health and civilian health mobilization programs including:

- o Development and management of the medical stockpile program.
- o Development of joint plans for coordination of civilian health services emergency programs of various Federal agencies (Veterans Administration, Department of Agriculture, Department of Commerce).
- o Cooperation with professional organizations and governmental agencies in planning and administering programs for mobilization and utilization of health resources (manpower, material and facilities).
- o Preparation for the emergency management and control of the Nation's civilian health resources.

- o Planning to provide emergency health services to the non-military population.

#### 1. Staff

The Division operated with a large staff divided almost evenly between headquarters and the field.

In the field structure there was a Regional Program Director located in each of the 10 DHEW regional offices and state representatives in 37 states. The state representatives were usually assigned to the State Health Director's office and office space, clerical assistance and travel funds were furnished by the state.

The services provided by the DHM field staff were as follows:

- o Coordinate on-the-spot health assistance activities in natural disasters;
- o Direct the placement of emergency medical supplies and motivate rotation of short shelf life items in the Packaged Disaster Hospitals and Hospital Reserve Disaster Inventory units assigned to the community hospitals;
- o Assist the state and local health agencies in the development and maintenance of emergency health operational readiness, including plans for the utilization of available health care facilities, health manpower, and medical supplies;
- o Assist in the implementation, promotion, and expansion of training activities, such as medical self-help, ambulance services, and hospital emergency departments; and
- o Serve as the DHEW representative to the Emergency Operating Center established by the Office of Emergency Preparedness at a disaster site. In many instances, the DHM assignee had the total responsibility for disaster health activities in the State Health Department.

## 2. Medical Stockpile

The emergency medical stockpile program basically was comprised of the storage of medical supplies and equipment in Packaged Disaster Hospitals (PDH), Hospital Reserve Disaster Inventories (HRDI), and Natural Disaster Hospitals (NDH). These supplies were managed by the General Services Administration (GSA) and were located throughout the United States.

- o The Packaged Disaster Hospital was a 200-bed assembly having sufficient supplies and equipment to provide austere hospital care for full-bed occupancy for a period of 30 days. Based on an average six-day stay, a total of 1,000 patients could receive care in this unit over a one-month period. The complement of supplies and equipment was aimed at post-nuclear attack casualty care and the mix of injuries likely to be found in such a population. Each unit was affiliated with an ongoing hospital, which was in charge of staffing the PDH and planning for its utilization. The selection of candidate hospitals and PDH pre-positioning sites was based on classified analyses to determine the optimum combination of usefulness and safety. Approximately 3,000 PDH's were in place.
- o The Natural Disaster Hospital was a 50-bed unit with supplies and equipment for the sorting, management, and short-term treatment of up to 300 casualties resulting from a natural disaster. Specifically, it was designed for the care of 100 ambulatory casualties who could be treated and released, 100 ambulatory casualties needing stabilization prior to evacuation for definitive care, and 100 non-ambulatory casualties requiring evacuation to an ongoing medical facility. There were 25 units placed in areas of frequent natural disasters--hurricanes, tornadoes, floods, etc.
- o The Hospital Reserve Disaster Inventory was designed to keep existing hospital beds, which survived an attack, in operation for 30 days without resupply. The unit consisted basically of expendable supplies and materials and was furnished in 50-bed, 100-bed and 200-bed increments. The program objective was to place a HRDI unit in every existing hospital of 50 beds or more. At the height of the program 1,353 HRDI units were pre-positioned. The resources were equivalent to a 30 day supply for 135,300 beds.

The GAS operated 12 depots for the bulk storage of medical supplies and equipment and the assembly, shipment and servicing of the PDH and HRDI units. All of the depots were Government owned, except those in Missouri and Pennsylvania. In accordance with a Memorandum of Understanding between GSA and DHEW, GSA provided for the management and operation of the depots on a reimbursable basis. The plans and policies for the stockpile operation were developed by DHEW and the housekeeping aspects were administered by GSA.

GSA performed the entire support service to carry out the medical stockpile program with the exception of procurements. All procurements were made for DHEW by the Defense Personnel Support Center, Philadelphia, Pennsylvania.

FY 1962 was the first year funds for emergency health activities were a direct appropriation to DHEW. The funds for FYs 1959-1961 were allocated to DHEW by the Office of Civil Defense Mobilization. Funding between 1962 and 1972 was as follows:

YEAR	THOUSANDS OF DOLLARS	
	BUDGET ESTIMATED TO CONGRESS	APPROPRIATION
1962	\$26,000	\$13,000
1963	41,445	7,000
1964	41,361	27,500
1965	9,507	8,875
1966	10,380	0
1967	10,430	10,000
1968	12,500	9,000
1969	2,400	0
1970	4,000	4,000
1971	3,755	3,755
1972	4,203	4,203

### *3. Training Program*

In addition to the management of the medical stockpile program, the Division also performed certain functions relating to the overall field of emergency medical care. These included the development and direction of a nationwide program to train health manpower both in professional and technical occupational content and in emergency disaster preparedness knowledge and skills; development and distribution of health education material for inclusion in the curricula of professional schools; and development and distribution of information relative to emergency health services to professional groups.

The Division also participated with the Army, Navy and Air Force in a program called the Medical Education for National Defense (MEND). This program was active in many medical schools in the United States and applied to education and training in the sorting and care of large numbers of the sick and injured in disaster situations.

The primary training program was the Medical Self-Help Training Course. This was designed to help prepare people for survival in time of natural or national disaster when the services of a physician or other health personnel would not be available. The program was endorsed by the American Medical Association and other professional groups and consisted of 16 hours of instruction. It covered specific information on health aspects of civil defense and differed from first aid as it dealt with what to do when physicians would be not available for a long period of time (days or weeks), while first aid is what to do until a physician arrives or the patient is taken to a medical facility.

The goal of the program was to train one member of each family or approximately 45,630,000 persons.

As of December 31, 1971, DEHS estimated 14,103,161 persons or 30.9% of the goal had been trained.

DHM personnel at headquarters Washington, D.C., the state representatives, and Regional Program Directors did not actually teach the course but their function was to promote the training course through state and community officials, schools, and representatives of industrial, civic, church, welfare, and farm organizations. Pamphlets and instructors' training kits were provided.

One of the main areas of training was through the school systems. For example, by the 1982 school year 80 percent of all high schools in the state of Tennessee had Medical Self-Help as part of their curriculum.

The Division also developed Packaged Disaster Hospital Training Kits for training of hospital staffs in the use of PDHS and Natural Disaster Hospitals. They had 14 hardware equipped training units which were rotated from state to state for training purposes.

To improve the competency of the emergency staff of hospitals the Division and the American Hospital Association jointly developed a training kit referred to as the "Door to Recovery." Included in the kits were narratives and slides for lectures, written instruction of standard procedures for emergency staffs, and an outline for hospitals to use to prepare emergency manuals.

Another aspect of training in which DHM was involved was the development of standards and guidelines for the training of ambulance attendants in first aid and emergency procedures.

#### *4. Emergency Organizational Structure*

In May 1960 the Secretary of the Department of Health, Education, and Welfare and the Director of the Office of Civil and Defense Mobilization jointly issued a policy statement. This policy provided that upon proclamation of a national emergency, the Department of Health, Education and Welfare would immediately become Emergency Health and Welfare Services (EH&WS).

At national and regional levels the personnel assigned to EH&WS were grouped into two subordinate organizations--the Emergency Health Service and the Emergency Welfare Service.

The Division was given primary responsibility for planning the EH portion of EH&WS. The planning involved the emergency structure and the coordination of the transition of DHEW from peacetime to emergency wartime status.

In the event of a national emergency the plans developed called for all health components of DHEW to be reorganized into four Bureaus each subdivided as follows:

##### Bureau of Health Operations

- Division of Medical Care
- Division of Community Health Services
- Division of Environmental Health Services
- Division of Food & Drugs
- Division of Laboratory Services

##### Bureau of Health Manpower

- Division of Manpower Resources
- Division of Manpower Utilization
- Division of Health Training

##### Bureau of Health Material

- Division of Resources and Requirements
- Division of Claimancy and Allocation
- Division of Procurement and Distribution

Bureau of Water Supply

Division of Water Resources  
Division of Water Facilities  
Division of Domestic Water Supply

A later reorganization eliminated the Bureau of Water Supply and the Division of Community Health Services was renamed the Division of Disease Control Services.

C. The Division of Emergency Health Services

In October 1968 as a result of changing administration priorities, a PHS reorganization resulted in the Division of Health Mobilization becoming the Division of Emergency Health Services (DEHS) which was administratively placed on a very low level as a component of the Federal Health Programs Service which itself was one of the eleven organizational elements comprising the Health Services and Mental Health Administration (HSMHA). From this point on the organization lost its impact and in 1973 it was dismantled. From 1973 until the present there has been no comparable Emergency Health Medical Planning component within PHS or for that matter anywhere in government. The operation was reduced from Division strength to several persons acting as an Emergency Coordination Staff within the PHS Office of Management.

D. Emergency Medical Services Systems (EMSS)

It is interesting to note that in the waning months of DEHS considerable effort was put forth by DEHS staff to revitalize the program by assuming a major role in the emerging interest for Federal support to localities to improve their emergency medical services capabilities (ambulances, communications, etc.). The Division already had the existing PHS role in this

area. Its evolution began in 1965 when an Office of Emergency Medical Services was established in the Division of Accident Prevention. Soon thereafter, this office became the Emergency Medical Services Branch. In January of 1967, the Division of Accident Prevention became the Injury Control Program in the newly organized National Center for Urban and Industrial Health, with the Emergency Medical Services Branch remaining intact. Several months later the Branch was transferred to the Division of Direct Health Services and renamed the Emergency Health Services Branch. In October 1968, the Branch was transferred to the Division of Health Mobilization. At that time the Branch's name was changed to the Hospital and Ambulance Services Branch.

The Division's interest in this area did not prevail and the primary responsibility in the area of Emergency Medical Services was placed elsewhere in PHS. On March 27, 1972 Requests for Proposals were sent out to about 100 communities to determine if they were interested in entering into a contract with DHEW for financial assistance to upgrade their emergency health care programs. It was the intent of HSMHA to build on competence; that is, identify and select five communities by the end of FY 1972 having the best emergency health care systems on which to build. Initially, the objective was to have five model systems to exemplify the best in emergency medical services to be used as national training resources and hopefully to inspire the upgrading of such systems on a nationwide basis.

The goals of the program were for the model systems to provide, on a community-wide basis, an integrated plan and program including:

- o Emergency communications with a single emergency phone number
- o A system of emergency medical care transportation
- o A triage system
- o An emergency medical care training program
- o Initial emergency care
- o Definitive acute care
- o Linkages to extended care, rehabilitation, and other facilities.

The plans called for upgrading additional systems following the initiation of the demonstration sites.

From this modest beginning and the subsequent passage of the Emergency Medical Systems Act of 1973, the EMSS program grew dramatically.

The dismantling of the DEHS and the creation of the EMSS Program had a negative impact on overall medical disaster related planning. The law which created the EMSS program did provide for a "Disaster Linkage" component. This aspect of the EMSS program was never addressed in a meaningful fashion but since it existed in the "law" it led to the misconception that EMSS groups were actively engaged in disaster planning. The result was that disaster planning largely ended. Almost all of the EMSS program effort was devoted to actively supporting the improvement of emergency medical care per se. The larger issues of medical disaster management such as resource control, staffing, training, nutrition, epidemic control, sanitation, water supplies, etc., were never addressed within the federal EMS program; however, some state agencies and individual grantees placed heavy emphasis in the role of EMS in responding to disasters.

Under the current administration the EMSS program was reduced sharply and put into block grant funding. The future of the program rests with the joint decision of state and local authorities and their willingness to provide the necessary financial support.

#### IV. CURRENT CIVILIAN HEALTH MOBILIZATION PREPAREDNESS

National preparedness to respond to the health and medical needs of a major crisis situation involves planning and resource management capability at all levels of government. At the Federal level the USPHS is charged with the bulk of this effort. Other agencies, particularly the Veterans Administration and the Department of Agriculture, also have health related responsibilities. The Department of Commerce is involved in the collection of a variety of health related data bases.

This section outlines the PHS health related executive order responsibilities, the staff to implement the responsibilities, the emergency organizational structure and the health related data base currently available for use in exercises and in actual emergency situations. It also addresses several aspects of Federal, regional, as well as state level preparedness.

#### A. Executive Order Responsibilities

The Executive Order 11490 assigning Health Preparedness functions to DHEW was last revised in 1976 (E.O. 11921). The portion of the Executive Order pertaining to health is quoted below.

The Secretary of Health, Education and Welfare shall prepare national emergency plans and develop preparedness programs covering

- Health Services
- Civilian Health Manpower
- Health Resources

The areas of responsibility are defined as follows:

"Emergency health services' means medical and dental care for the civilian population in all of the specialties and adjunct therapeutic fields, and the planning, provision, and operation of first aid stations, hospitals, and clinics; preventive health services, including detection, identification, and control of communicable diseases, their vectors, and other public health hazards, inspection and control of purity and safety of food, drugs, and biologicals; vital statistics services, rehabilitation and related services for disabled survivors; preventive and curative care related to human exposure to hazardous agents (nuclear, biological and chemical); sanitary aspects of disposal of the dead; and food and milk sanitation. It shall be understood that health services for the purposes of this order do not encompass the following areas for which the Department of Agriculture has responsibility: plant and animal diseases and pest prevention, control, and eradication; wholesomeness of meat and meat products, and poultry and poultry products, in establishments under continuous inspection service by the Department of Agriculture; veterinary biologicals, agricultural commodities and products owned by the Commodity Credit Corporation or the Department of Agriculture; livestock, agricultural commodities stored or harvestable on farms and ranches; agricultural lands and water.

"Health manpower' means physicians (including osteopaths); dentists; sanitary engineers; registered professional nurses; and such other occupations as may be included in the List of Health Manpower Occupations issued for the purposes of this part by the Director of the Federal Preparedness Agency (GSA) after agreement by the Secretary of Labor and the Secretary of Health, Education and Welfare.

"'Health resources' means manpower, material, and facilities required to prevent the impairment of, improve, and restore the physical and mental health conditions of the civilian population."

With respect to emergency health services as defined above, and in cognizance with National civil defense plans, the Secretary of DHEW (DHHS) is directed to execute the following functions:

"(1) Professional training. Develop and direct a nationwide program to train health manpower both in professional and technical occupational content and in civil defense knowledge and skills. Develop and distribute health education material for inclusion in The curricula of schools, colleges, professional schools, government schools, and other educational facilities throughout the United States. Develop and distribute civil defense information relative to health services to States, voluntary agencies, and professional groups.

"(2) Radiation. Develop and coordinate programs of radiation measurement and assessment as may be necessary to carry out the responsibilities involved in the provision of emergency health services.

"(3) Biological and chemical warfare. Develop and coordinate programs for the prevention, detection, and identification of human exposure to chemical and biological warfare agents as may be necessary to carry out the responsibilities involved in the provisions of emergency health services, including the provision of guidance and consultation to Federal, State and local authorities on measures for minimizing the effects of biological or chemical warfare.

"(4) Food, drugs, and biologicals. Plan and direct national programs for the maintenance of purity and safety in the manufacture and distribution of food, drugs, and biologicals in an emergency.

"(5) Disabled survivors. Prepare national plans for emergency operations of vocational rehabilitation and related agencies, and for measures and resources necessary to rehabilitate and make available for employment those disabled persons among the surviving population.

B. Staff

As pointed out previously, historically the health related Civil Defense responsibilities of HHS were vested in a sizeable PHS division with an extensive network of staff at regional and state levels. One can definitely make the case that meaningful execution of the executive order responsibilities requires a substantial level of staff input. Whether this staff is formed in a separate division or spread throughout PHS is probably immaterial provided that the tasks are accomplished. Since 1973 it has been HHS/PHS policy to spread out the responsibilities, with each agency's Civil Defense function being monitored by an emergency coordinator. The distribution of the PHS staff is as follows:

At PHS level there is an Emergency Coordinator's Office with a full-time staff of four to five persons. In addition, there is one emergency coordinator in each of the following agencies:

<u>Agency</u>	<u>Time Spent in Emergency Coordination</u>
Alcohol, Drug Abuse and Mental Health	15%
Center for Disease Control	50%
Food & Drug Administration	100%
Health Resources Administration	10%
Health Services Administration	4%
National Institute of Health	100%

Each of the ten HHS regions also has one person designated as the regional PHS emergency coordinator; however, none of the regional coordinators are full time as such. The role of the Regional Emergency Coordinator is to:

- o Develop plans for both peacetime emergencies and defense preparedness,
- o Integrate emergency preparedness activities into staff office and operating component day-to-day activities,

- o Coordinate emergency plans with those of other Federal agencies, States and with non-government organizations and associations such as the American Medical Association, the American Hospital Association, the Red Cross, etc.

Policy has been to encourage coordinators to focus on increasing the emergency preparedness awareness among all program managers within their agencies as an extension of their day-to-day tasks.

This policy, while theoretically sensible in that it merges the emergency coordinators into close liaison with policy officials, administrators and program managers throughout PHS, has not worked well in terms of National Health/Medical Disaster Preparedness. To be sure, PHS as well as other elements of HHS have responded to emergencies. Mt. St. Helens involved the Food & Drug Administration, the Center for Disease Control, the National Institute of Mental Health, the Social Security Administration and the Health Care Financing Administration. The HHS agencies responding to this particular crisis situation were those already charged with specific functions applicable to the disaster management process at Mt. St. Helens. The system of coordinators no doubt facilitated the HHS response but it should be noted that the response was organic to the natural functions of the various responding agencies and would have taken place with or without a system of emergency coordinators. The point is that by in large neither the emergency coordinators nor the agencies to which they are assigned have adequately addressed the major issue of preparedness to cope with a health/medical crisis of national proportion.

HHS has asked its various operating elements to assess how their programs and capabilities could be used to support emergency operations. The information aggregated from various agencies and offices is being used to develop a new department-wide Emergency Manual. The extent to which this might increase emergency planning awareness and activity remains to be seen.

The PHS portion of the new manual (which has not yet been officially released) has not changed substantially from its forerunner.

In the event of a health/medical national emergency the PHS plan calls for the formation of three teams: A, B, and C. Team C, headed by the Surgeon General and currently composed of 30-plus persons, would relocate at the classified department relocation site. The C team leader is the person designated as the Chief of the Emergency Health Services. The B team headed by the Assistant Secretary for Health is composed of ten persons. In an emergency it would relocate at the classified Federal Government relocation site. Both the B and C teams are staffed and do participate in tests and exercises. The A team is currently not staffed. It represents the PHS personnel that would be assigned in emergency situations to the DHHS EOC in the Humphrey Building in Washington, D.C. Plans are underway to reactivate Team A.

#### C. Emergency Operational Structure

Upon declaration of a national civil defense emergency or enemy attack upon the United States, the USPHS would convert into an Emergency Health Service (EHS). All the resources of the PHS would be focused through the EHS to assist states in meeting emergency health needs.

The organizational structure in the new Emergency Manual calls for the EHS to be subdivided into three bureaus each having two divisions.

EMERGENCY HEALTH  
SERVICE

CHIEF  
SURGEON GENERAL

BUREAU OF  
HEALTH OPERATIONS

- Medical Care
- Disease Control

BUREAU OF  
RESOURCES MANAGEMENT

- Health Profession
- Health Material

BUREAU OF  
FOOD AND DRUGS

- Drugs and  
Biologicals
- Food

The overall functions of the EHS are summarized as follows:

o Office of Chief

- Director EHS activities
- Coordinates with state and other Federal agencies
- Maintains international health intelligence
- Administers PHS Command Corps

o Bureau of Health Operations

- Evaluates health status
- Determines health requirements
- Conducts programs to meet need for

Individual medical services  
Community health services  
Disease control  
Mental health  
Laboratory services

o Bureau of Resource Management

- Determines availability of resources
- Provides for procurement, storage and distribution of resources
- Plans for construction of facilities
- Plans for medical supply and equipment production
- Coordinates deployment of PHS Command Corps
- Plans health manpower allocations

o Bureau of Food and Drugs

- Assess drug inventory and production capability
- Assures safety and potency in drug productions and quality control of food production and distribution
- Monitors safety of veterinary preparations.

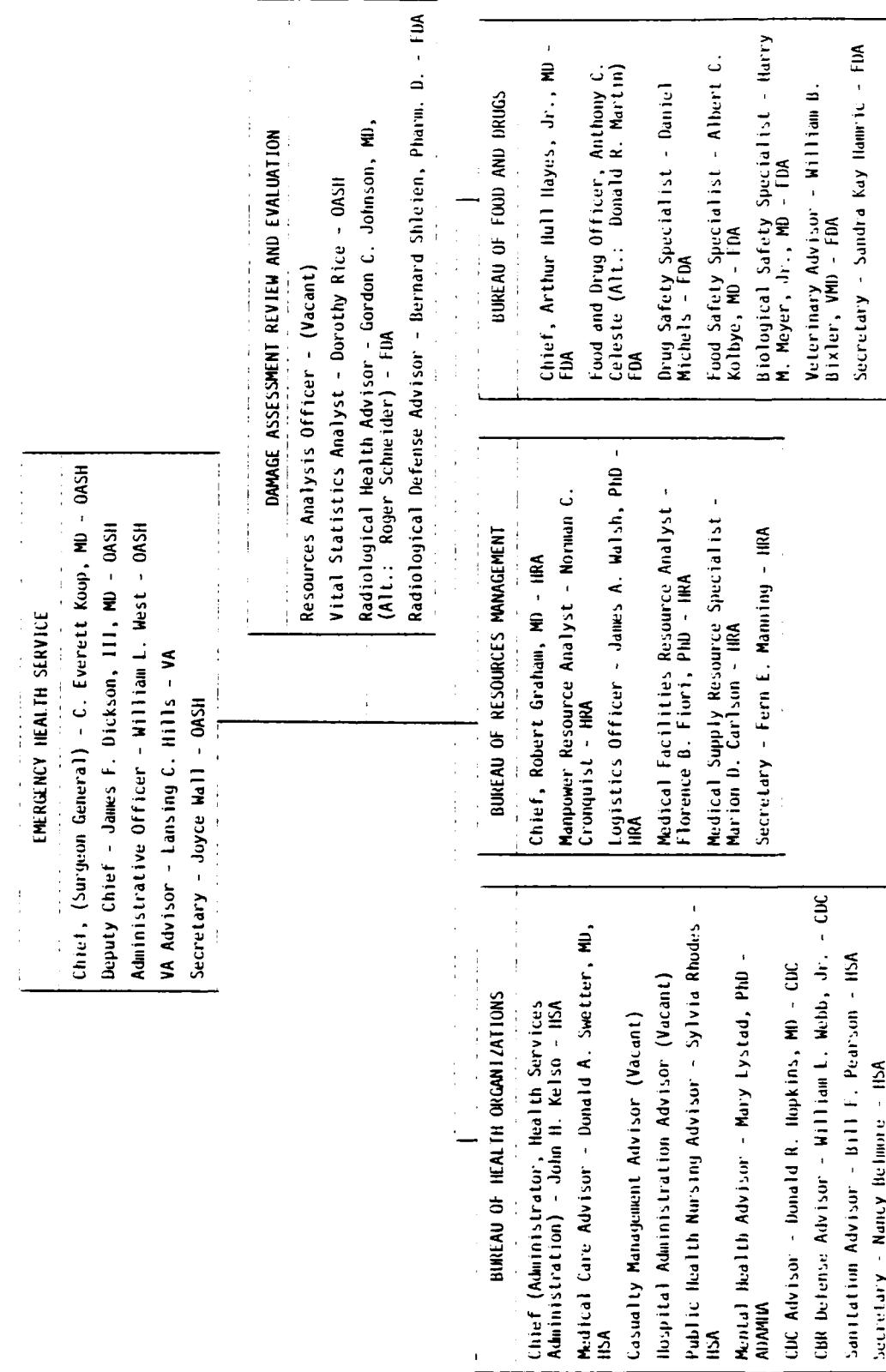
All of the individuals listed in the EHS organizational chart, Figure IV-1, are members of Team C. In an emergency they would all be located together at the DHHS classified relocation site.

It is important to note that the EHS organization is not intended to be the provider of resources. It is the administrative structure through which surviving health resources will be allocated, distributed and applied. It also will provide guidance to state and local health officials in terms of disease control, resource management, food and drug safety and utilization. The PHS emergency management concept is that the Federal EHS structure should be replicated in each of the regional offices. In a war situation, most of the activity is envisioned to take place at the regional level. State health planning groups are also encouraged to formulate an emergency health services structure. The national degree or level of readiness, therefore, is largely dependent on the extent to which regions and states have prepared. Therefore, in addition to the extent to which the Federal level is in compliance with the executive order any assessment of overall readiness should include regional and state levels of responsibility as well.

D. Emergency Operational Responsibilities

At this point it is appropriate to note that the Health portion of the executive order needs substantial modification. It is ambiguous and out of date. It certainly does not reflect the realities of 1982. The specific functions with respect to Health Services (Page 16) have not been addressed by PHS for almost ten years. Health manpower and resource issues have been dormant for an equal length of time. One reason for this lack of activity has been the policy of past administrations to ignore both the planning and maintenance of a Civil Defense program. Since the current administration appears

FIGURE IV-1  
EHS ORGANIZATIONAL CHART



to be interested in health mobilization planning serious consideration should be given to reviewing the existing health mobilization capability within PHS. It is questionable if the current administrative structure, which largely depends on part-time emergency coordinators, could accommodate increased Civil Defense Health/Medical Planning. It is tempting to suggest that the PHS should reactivate a Division of Health Mobilization and this, of course, is one way to upgrade the planning activity. The alternative would be to put teeth into the current approach by giving the emergency coordinator the authority to insure that each functional PHS unit address Civil Defense planning as a contingency component of its normal operational activity. In addition to firm support from the Surgeon General, to be successful, this approach would also require an administrative upgrading of the PHS emergency coordinator position.

The EHS as described above is the emergency operating agency which would be activated in a major national crisis such as war. For most non war-related crisis situations the current PHS policy is to use the Center for Disease Control, CDC, (Atlanta) as its lead agency to coordinate the PHS response. These non war-related emergencies include:

- Natural Disasters
- Internal Disturbances
- Technological Emergencies
  - Radiation
  - Chemical
  - Toxic
  - Air
  - Biological

In addition to the CDC role, the Food and Drug Administration (FDA) is designated as the lead PHS agency in responding to energy and material shortages while the PHS response to refugee problems is vested in the refugee health staff in the immediate office of the Assistant Secretary for Health.

A separate guide for the PHS response to each of the above potential emergency situations is currently being prepared. The above delegation of

responsibility refers to the designation of the lead group within PHS. The emergency response for which PHS has been designated the lead Federal Government agency is that of biological emergencies.

While FEMA has the overall role of coordinating the Federal response to crisis situations, other agencies have lead responsibility for certain technical direction and measurement which could impact on the Federal management decisions in health/medical crisis situations. For example:

- o The PHS Center for Disease Control is the lead Federal Agency in response to biological emergencies.
- o The Department of Energy leads the off-site technical direction in response to radiation emergencies, while the Nuclear Regulatory Commission leads the on-site direction and the DOD leads in all cases of nuclear weapons accidents.
- o The Environmental Protection Agency is the lead agency for air pollution and toxic waste emergencies and is responsible for technical off-site measurements in chemical exposure emergencies and the Department of Labor (OSHA) is responsible for similar measurements within the work place.

For most potential medical emergency situations the Federal Government is reasonably well equipped in terms of being able to quantify the extent of a given problem and the potential health/medical consequences of a particular crisis situation.

If properly applied and coordinated, Federally owned or controlled medical resources would probably be sufficient to augment local capability to deal with most medical crisis situations short of nuclear war or a major West Coast earthquake. In this regard, it should be noted that in most if not all situations involving a crisis with health/medical problems, the bulk of the medical supplies, facilities and equipment and all of the medical manpower (in terms of medical care) has always been arranged for and provided by non-Federal sources.

In theory, at least the Federal capability regarding emergency plans in place, the delegation of emergency operating responsibilities, and the designation of lead "response" agencies would provide the coordination and the necessary data on which the overall Federal response in terms of policy directives, evacuation orders, administrative decisions and the allocation of medical resources could be based. In practice, however, the extent to which the various Federal response groups can be coordinated effectively is open to some questions. An incident such as Three Mile Island demonstrated a serious lack of coordination while Mt. St. Helens demonstrated the opposite. Assuming proper coordination, the Federal Government could respond adequately to most health/medical crisis situations using existing Federal resources.

Federal Government health/medical resources consist of the health manpower in DOD, VA and PHS; the medical facilities in DOD and VA; and the supplies held by both DOD and VA. Additional Federal resources consist of the following items still maintained in the national stockpile:

- o Quinidine
- o Quinine
- o Opium Alkaloids
- o Opium Crude Gum

In addition, the substantial health resources of state and local governments have not been assessed, but they would include hospitals, clinics, public health departments, laboratories, and health manpower.

Recognizing that with proper coordination existing government resources are likely to be adequate to meet conventional emergency needs, the issue which should be of concern to FEMA is the coordination of the National response to unconventional situations which overtax existing plans and resources. This essentially addresses the concept of Emergency Health/Medical Resource Mobilization.

The three basic elements of health/medical mobilization are:

- o Manpower (Health)
- o Facilities (Hospitals, etc.)
- o Supplies (Drugs, Biologicals, Equipment, Surgical and Medical Supplies)

### E. Health Manpower

Mobilization plans and techniques can be developed for manpower on the basis of existing data. The basic data on manpower is readily available and can be tailored to specific requirements without great cost. Figure IV-2 provides a National Summary of Health Manpower with physicians being listed in some detail. The data is current for late 1981. The sources for the data are the Department of Defense, the U.S. Public Health Service, the Veterans Administration and the American Medical Association.

All professional associations keep fairly accurate and current data files on the number and location of their professionals. This usually also includes quite specific data as to specialties and practice patterns. Moreover, in most cases it includes the association's members and non-members.

Because of this readily available data, it is an easy matter to keep emergency health manpower files current. This, however, has not been done. The data on file at classified emergency relocation sites is very much out of date. The emergency manpower files classified as category HMD cover data on nine medical occupations. The personnel are located by zip code area. The content, the currency and the source of the data on file is as follows:

<u>Currency</u>	<u>Content</u>	<u>Data Source</u>
1973	No. of Physicians	National Center for Health Statistics
1968	No. of Osteopaths	American Osteopathic Association
1974	No. of Dentists	National Center for Health Statistics
1966	No. of Registered Nurses	American Nurses Association
1968	No. of Optometrists	NCHS Survey

<u>Currency</u>	<u>Content</u>	<u>Data Source</u>
1974	No. of Pharmacists	National Center for Health Statistics
1970	No. of Podiatrists	American Podiatry Association
1968	No. of Veterinarians	American Veterinary Medical Association
1967	No. of Licensed Practical Nurses	American Nurses Association
1974	No. of Occupational Therapists	National Center for Health Statistics

While some health related data does not need to be current to have value (i.e., the location of hospitals), manpower data is very fluid. In just a few years major changes can occur. One example of this is the recent major reduction in force as well as the substantial relocation of personnel within the PHS Commissioned Corps all taking place within one year.

Health mobilization activity should set a high priority on updating the Government's files on health manpower. A health manpower summary by state is included in the appendix.

#### F. Health Facilities

Facility data, just as manpower information, is readily available through a variety of sources.

Figure IV-3 provides a National Summary of Hospital Facilities. The source for this data is the American Hospital Association 1980 and 1981 publications. The data is divided in groups by control category. The Former Federal Category is listed as such since it is not completely clear at this point just who now controls these former PHS hospitals. Most of them, however, have been taken over by local government. In terms of size, it is clear that the Veterans Administration, with 78 percent of the total Federal beds, represents the largest such Federal resource.

FIGURE IV-2\*

## UNITED STATES SUMMARY OF HEALTH MANPOWER\*\*

	SURGEONS			NON-SURGEONS			TOTAL		
	RESERVES		TOTAL	RESERVES		TOTAL	RESERVES		TOTAL
	DOD	PHS		DOD	PHS		DOD	PHS	
ARMY			985			3,913			4,898
NAVY			438			2,777			3,215
AIR FORCE			795			2,777			3,572
PHS (Comm. Corps)			181			2,070***			2,251
FEDERAL COMMISSIONED SERVICE									
SUBTOTAL			2,399			11,537			13,936
PHS (Civilian)									848
VA FULL TIME	29		606	157		6,306	186		6,912
VA PART TIME	44		1,133	51		3,247	95		4,380
FEDERAL CIVILIAN SERVICE SUBTOTAL			1,739			9,553			12,140
CIVILIAN (Active)	1,602	194	102,900	4,205	2,707	268,319	5,807	2,901	371,201
CIVILIAN (Inactive)									28,585
CIVILIAN (Unknown)									23,294
TOTAL	1,675	194	107,038	4,205	2,707	289,409	6,088	2,919	449,156
NURSES RN	<u>1,028,003</u>			PODIATRISTS			<u>6,998</u>		
NURSES LPN	<u>405,546</u>			OPTOMETRISTS			<u>19,041</u>		
DENTISTS	<u>107,946</u>			PHARMACISTS			<u>102,414</u>		
VETERINARIANS	<u>29,566</u>			MEDICAL SCHOOLS			<u>120</u>		
M.D. GRADUATES PER YEAR	<u>14,273</u>								

\*Represents 1981/1982 Data

\*\*Data excludes U.S. Possessions

\*\*\*45 of these are stationed overseas

FIGURE IV-3

UNITED STATES  
SUMMARY OF HOSPITAL FACILITIES  
Percent Occupancy 76.1

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Army	35	8,858		
Navy	23	3,807		
Air Force	64	5,263		
Veterans Administration	138	70,863	23	18,655
Indian Health (PHS)	46	2,090	1	102
Department of Justice	15	835		
Other	1	33	2	2,388
<b>SUBTOTAL</b>	<b>322</b>	<b>91,749</b>	<b>26</b>	<b>21,145</b>
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)	9	1,642	1	357
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	<b>1,785</b>	<b>210,645</b>	<b>269</b>	<b>187,694</b>
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	3,330	689,711	74	9,339
For Profit	728	83,540	118	10,493
Other	258	46,444	1	53
<b>SUBTOTAL</b>	<b>4,316</b>	<b>819,795</b>	<b>193</b>	<b>19,887</b>
<b>TOTAL</b>	<b>6,432</b>	<b>1,123,731</b>	<b>489</b>	<b>229,083</b>

The health facility data maintained at classified relocation sites also is not current but since it is far more stable than manpower data, its currency is not as important. The files in place are discussed below. The data category classification identifies the source of the data.

Data Category HDC represents 1962 data on the location of state and local health departments and clinics. This file is a listing of 1,782 health departments and clinics. It includes the number of physicians, nurses, dentists, veterinarians, sanitary engineers, sanitarians and laboratory workers at each specific location.

Data Category HHH includes 1976 data on the location of medical care facilities. This category includes all hospital facilities in the U.S. listed by the American Hospital Association. It covers 7,271 hospitals. Information available includes type of hospital, size, ownership, and specialized services available.

Data Category HHV represents 1976 data on Veterans Administration facilities.\* This file covers major Veterans Administration facilities from the central office to field activities such as hospitals, regional offices, data processing centers and supply depots. A total of 246 facilities are included. As appropriate, the following information is available for each facility:

- Bed capacity under limited mobilization
- Bed capacity under general war
- Total full-time personnel
- Number of Doctors, Dentists and Nurses

Health mobilization activity should address the currency and scope of health facility data on file, but it should not be as high priority as manpower information. Updating of this data should include an evaluation of the beds likely to be available, by facility, for utilization as back-up or overflow space as needed during emergency situations.

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\*PHS sources indicate that more current data has been supplied to FEMA.

## G. Health Supplies

This section includes a general discussion on health supplies including a description of the health resources emergency data bases available and pre-positioned in classified relocation sites.

### *1. Discussion*

While the data available on manpower and facilities is adequate for National Emergency planning purposes, the data available on the inventory level and distribution of medical supplies is not. As mentioned previously, at one time the Federal Government maintained a sizeable "medical stockpile." This is now gone and due to its enormous cost; it is extremely unlikely that either the Federal Government or any of the state governments will ever re-institute a meaningful stockpile of essential disaster related supplies. This in fact means that in a major crisis, private sector resources would have to be relied upon to provide the bulk of all the needed supplies. This is of major significance since the Federal Government does not currently have access to current data (inventory, location, ownership) on privately owned medical resources (supplies, equipment, drugs, etc.) The lack of this data on a readily available basis represents the weakest link in National Health/ Medical Mobilization Planning and in FEMA's capability to coordinate the medical aspects of the Federal Government's response to a major crisis.

The ability to control existing health resources is the single most important aspect of health mobilization planning. Lead health agencies operating under the overall direction of FEMA in a crisis situation must have the capability to control the surviving resources so that sensible allocation decisions in any given operating environment can be made and enforced. It follows that effective

resource control would be impossible without knowledge of the location and size of the surviving resource inventory; therefore, an extremely important element of the health mobilization planning process is the documentation of the available resources and the capability to quickly assess the surviving resources in the event of a major crisis. This would involve advance knowledge of:

- o The location of the resource,
- o The normal inventory level on hand,
- o The vulnerability of the resource,
  - The crisis related damage to the resource,
  - Emergency Countermeasures to increase supply and/or production, and
  - Availability of acceptable substitutes.

To point out the relative distribution of supplies between public and private control, Figures IV-4 and IV-5 present the nationwide dollar value (cost-not-retail) distribution of drugs and biologicals. (NOTE: This data does not include medical equipment, surgical supplies, hospital equipment, medical devices or any medically related hardware. For these items the distribution of ownership would be expected to be different; however, the ratio between public and private ownership would probably not vary from that of drugs and biologicals.) The data presented does represent all products which, under normal situations, would require a prescription to procure. Included in this are all types of vaccines, blood volume expanders and other fluid replacement products. The sources of the data are the:

- o American Pharmaceutical Association
- o Pharmaceutical Manufacturers Association
- o International Marketing Service
- o The Veterans Administration
- o The Department of Defense
- o Pharmaceutical Industry

FIGURE IV-4

NATIONWIDE DOLLAR VALUE  
DISTRIBUTION OF DRUGS AND BIOLOGICALS  
(MILLIONS OF DOLLARS)

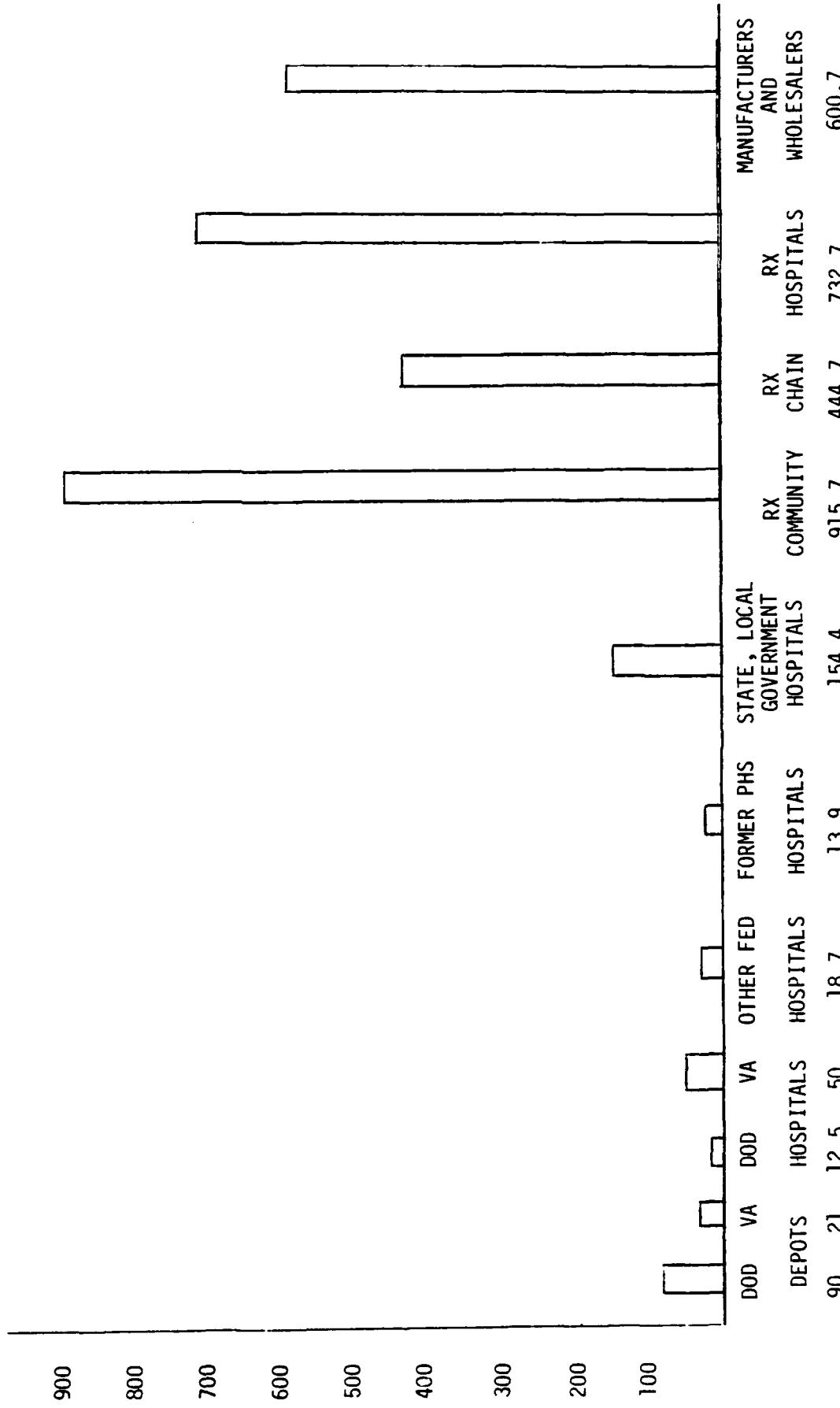
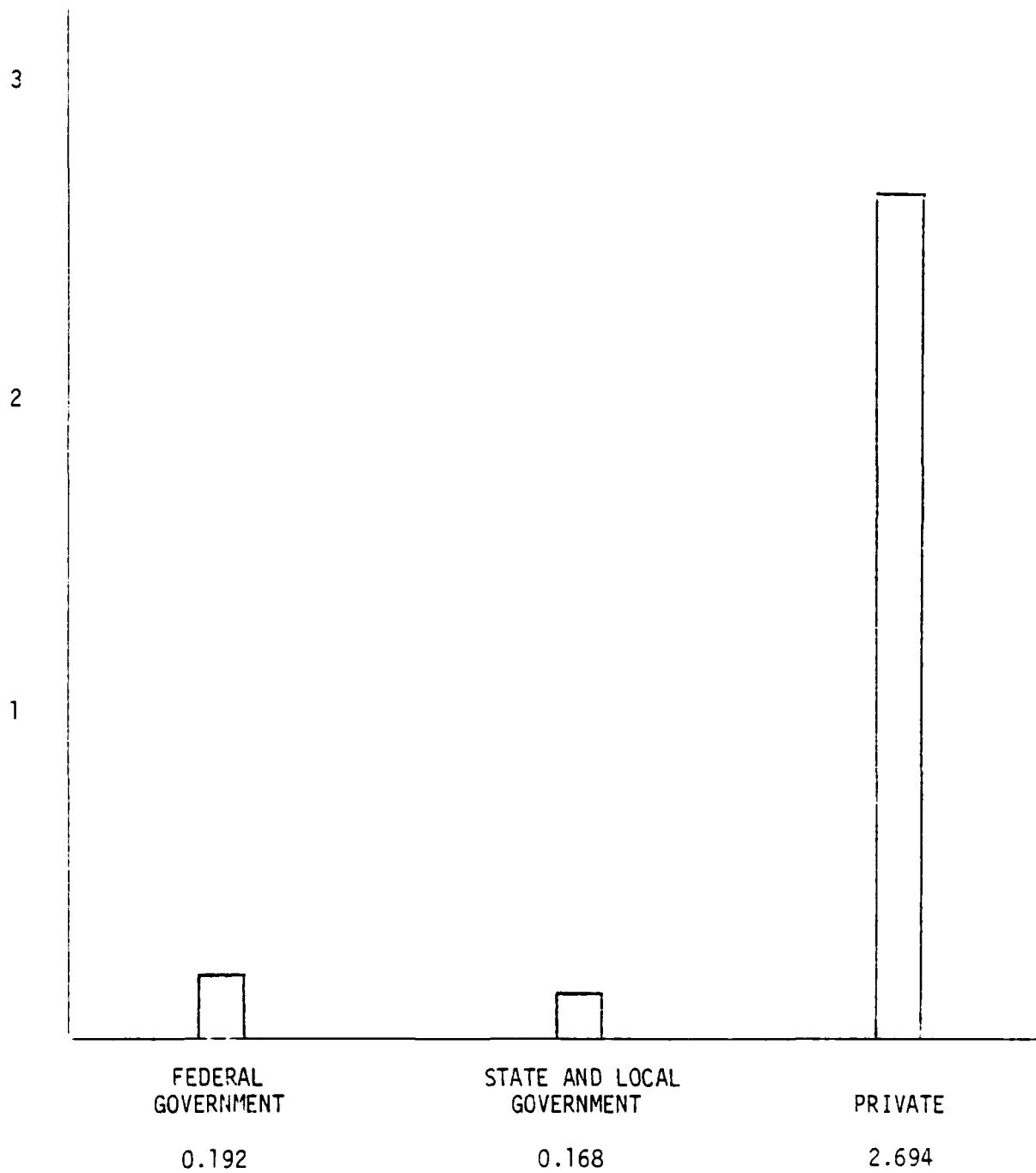


FIGURE IV-5  
PRIVATE VERSUS GOVERNMENT DOLLAR VALUE DISTRIBUTION  
OF DRUGS AND BIOLOGICALS  
(BILLIONS OF DOLLARS)



As can be seen in Figures IV-4 and IV-5 the dollar value distribution is overwhelmingly under private rather than government control. While the dollar value distribution in terms of ownership can be established for all medically related resources, this does little to help the FEMA planning process except to dramatically point out the lack of Federal resources. A National Emergency Health/Medical Resources Mobilization Effort would require far more detailed pre-crisis information. In the past this type of data was developed by the Interagency Industry Evaluation Board (IEB) which is chaired by the Department of Commerce. It is appropriate at this point to discuss the historical activity of the IEB and the utility of its data currently on file.

## *2. The Industry Evaluation Board*

Figure IV-6 is a list of Essential Health Survival Items. This official list has been revised once and perhaps twice since its inception in the late 1950's. The Figure IV-6 list is a mid-1960's version which should be reviewed for currency and applicability.

The essential item list is one of the documents that guides the Department of Commerce (DOC) and others in the development of emergency health related data bases to evaluate the capability U.S. industry to accommodate requirements during periods of national emergency. This activity is directed by the DOC through the Industry Evaluation Board (IEB).

The Industry Evaluation Board (IEB) provides, as part of the industrial mobilization program, an interdepartmental mechanism for evaluating the capability of U.S. industry to accommodate requirements for selected critical materials and products, especially during periods of national emergency. On January 6, 1951, at the request of the National Security Council, the President of the United States

FIGURE IV-6  
ESSENTIAL HEALTH SURVIVAL ITEMS

1. Pharmaceuticals:

Alcohol  
Analgesics, non-narcotic  
Antibiotics and anti-bacterials  
Antidiabetic Agents (Oral)  
Antihistamines  
Antimalarials  
Atropine  
Blood derivatives  
Carbon dioxide absorbent  
Cardiovascular depressants  
Cardiovascular stimulants  
Corticosteroids  
Diuretics  
General anesthetics  
Hypnotics  
Insulin  
Intravenous solutions for replacement therapy  
Local anesthetics  
Lubricant, surgical  
Morphine and substitutes  
Oral electrolytes  
Oxygen  
Surgical antiseptics  
Sulfa drugs  
Synthetic plasma volume expanders  
Vitamin preparations, pediatric  
Water for injection

2. Blood Collecting and Dispensing Supplies:

Blood collecting and dispensing containers  
Blood donor sets  
Blood grouping and typing sera  
Blood recipient sets  
Blood shipping containers

3. Biologicals:

Diphtheria toxoid  
Diphtheria antitoxin  
Diphtheria and tetanus toxoids and pertussis vaccine  
Gas gangrene antitoxin  
Poliomylitis vaccine, oral  
Rabies vaccine  
Smallpox vaccine  
Tetanus antitoxin  
Tetanus toxoid, absorbed  
Typhoid vaccine  
Typhus vaccine, epidemic  
Yellow fever vaccine

4. Surgical Textiles:

Adhesive plaster  
Bandage, gauze  
Bandage, muslin  
Bandage, plaster of paris  
Cotton, USP  
Surgical pads  
Stockinette, surgical  
Wadding, cotton sheet

5. Emergency Surgical Instruments and Supplies:

Airway, pharyngeal  
Anesthesia apparatus  
Basin, wash, solution  
Blade, surgical knife  
Brush, scrub, surgical  
Catheter, urethral  
Containers for sterilization  
Chisel, bone  
Drain, Penrose  
Dusting powder  
Forceps, dressing  
Forceps, hemostatic  
Forceps, obstetrical  
Forceps, tissue  
Gloves, surgeon's  
Handles, surgical, knife  
Holder, suture needle  
Inhaler, anesthesia, Yankauer (ether mask)  
Intravenous injection sets  
Knife, cast cutting  
Lamps, for diagnostic instruments  
Lamps, for surgical lights  
Laryngoscope  
Light, surgical, portable  
Litter  
Mallet, bone surgery  
Needles, hypodermic, reusable  
Needles, suture, eyed  
Otoscope and ophthalmoscope set  
Probe, general operating  
Razor and blades (for surgical preparation)  
Retractor, rib  
Retractor set, general operating  
Rongeur, bone  
Saw amputating  
Saw, bone cutting, wire (Gigli)  
Scissors, bandage  
Scissors, general surgical  
Sigmoidoscope  
Speculum, vaginal  
Sphygmomanometer  
Splint, leg, Thomas  
Splint, wire, ladder  
Sterilizer, pressure, portable  
Stethoscope  
Sutures, absorbable  
Sutures, absorbable, with attached needle  
Sutures, nonabsorbable  
Sutures, nonabsorbable, with attached needle  
Syringes, Luer, reusable (hypodermic syringes)  
Thermometers, clinical  
Tracheotomy tube  
Tube, nasogastric  
Tubing, rubber or plastic, and connectors  
Vascular prostheses  
Webbing, textile, with buckle

6. Laboratory Equipment and Supplies:

Bacteriological culture media and apparatus  
Balance, laboratory with weights  
Blood and urine analysis instruments, equipment and supplies  
Chemical reagents, stains and apparatus  
Glassware cleaning equipment  
Laboratory glassware  
Microscope and slides  
Water purification apparatus

directed the establishment of this Board within the Department of Commerce. The activities of the Board are under the direction of a chairperson designated by the Secretary of Commerce. The objectives of the IEB are:

- a. To identify products, groups of related products, and industrial services that are of sufficient importance to the national security that their continued production or operation must be assured under any emergency condition.
- b. To present a concise picture of national capability to manufacture the products or to furnish the services specified.
- c. To identify, geographically locate, and determine the relative importance of the establishments engaged in the manufacture of products or provision of services analyzed.

Board membership consists of representatives of the Departments of Commerce, Agriculture, Defense, Energy, Labor, Interior, Health and Human Services and the Federal Emergency Management Agency. Board decisions are based upon industrial analyses, prepared in accordance with prescribed content and format, by specialists in numerous agencies of the Federal Government.

The subject of each IEB analysis is a product, or a group of closely related products, that is of direct and exceptional importance to the national defense. Hence, the subjects of IEB analyses are drawn from the entire range of industrial production. A single analysis may comprise a large industrial sector involving several hundred producers or an entire service industry consisting of many contributing facilities, or it may be limited to a single strategic item or specialized component produced by only one manufacturer.

The analyses demonstrate the significance of the subject products to national defense during conventional or nuclear attack conditions and to survival and recovery following an attack. All producing plants,

their precise locations, their current and maximum annual production capacities and the relative importance of each to the total national capacity are enumerated.

Although the Federal government routinely collects statistics on production, shipments, labor, and materials consumption aggregated into industrial groupings, only the IEB studies provided detailed plant-by-plant capacity and supporting information. IEB analyses are usually prepared from data collected via mandatory industry surveys. Because these data are often company confidential, access is restricted to government employees having a "need-to-know."

Over the years, classified analyses of numerous and varied products have been prepared and distributed by the Industry Evaluation Board. All the IEB Health/Medical related analyses conducted to date are listed below. As can be seen, none of the data is current. The most recent entry is 1978.

<u>Analysis Number*</u>	<u>Analysis Subject</u>	<u>Data as of</u>
1/828	Anti-Rheumatic & Anti-Inflammatory Drugs Hydrocortisone Prednisone Dexamethasone Triamcinolone Indomethacin Phenylbutazone	June 1969
2/967	Antimalarial Drugs Chloroquine & Hydroxychloroquine Amodiaquine Pyrimethamine Primaquine	June 1976
3/812	Antitussives, Synthetic, Non-Narcotic Benzonatate Carbetapentane Dextromethorphan Dimethoxanate	Sept. 1968

\*The first number is merely the sequence as presented in this report. The second number is the actual IEB identifier.

<u>Analysis Number</u>	<u>Analysis Subject</u>	<u>Data as of</u>
4/827	Diuretics Sodium Mercaptomerin Ethacrynic Acid Spironolactone Triameterene Chlorothiazide Bendroflumethiazide Hydrochlorothiazide Benzthiazide Trichlormethiazide Polythiazide Methyclothiazide	June 1969
5/876	Antitoxins Diphtheria Gas Gangrene Tetanus	June 1971
6/969	Tetanus Toxoids Smallpox and Plague Vaccines	June 1976
7/876	Polio, Rabies, Rubella Typhoid (Monovalent) Typhus Vaccines	June 1971
8/986	Insulin	July 1978
9/924	Sulfa Drugs Sulfadiazine Sulfamerazine Sulfamet Hazine Sulfisoxazole Sulfamethozazole Sulfamethizole Mefanide Acetate	March 1973
10/959	Antibiotics Broad-Spectrum Tetracycline Demeclocycline Methacycline Doxycycline Minocycline Chloramphenicol Ampicillin Cephalexin Other Cephalosporins	Sept. 1974

<u>Analysis Number</u>	<u>Analysis Subject</u>	<u>Data as of</u>
10/1959	Antibiotics ( <i>continued</i> ) <ul style="list-style-type: none"> <li>Medium-Spectrum               <ul style="list-style-type: none"> <li>Erythromycin</li> <li>Kanamycin</li> <li>Clindamycin</li> </ul> </li> <li>Narrow-Spectrum               <ul style="list-style-type: none"> <li>Penicillins</li> <li>Oxacillin</li> <li>Methicillin</li> <li>Streptomycin</li> <li>Gentamicin</li> </ul> </li> <li>Other               <ul style="list-style-type: none"> <li>Amphotericin B</li> <li>Nystatin</li> <li>Polymyxin B</li> <li>Spectinomycin</li> </ul> </li> </ul>	Sept. 1984
11/526	Chloroform	November 1959
12/764	Analgesics, Non-Narcotic <ul style="list-style-type: none"> <li>Aniline Derivatives</li> <li>Acetylsalicylic Acid</li> <li>Other Salicylic Acid Derivatives</li> <li>Propoxyphene</li> </ul>	Sept. 1967
13/897	Anesthetics <ul style="list-style-type: none"> <li>Inhalation               <ul style="list-style-type: none"> <li>Diethyl Ether</li> <li>Halothane</li> <li>Cyclopropane</li> <li>Nitrous Oxide</li> <li>Methoxyflurane</li> </ul> </li> <li>Intravenous               <ul style="list-style-type: none"> <li>Secobarbital</li> <li>Thiopental</li> <li>Methohexital</li> <li>Ketamine</li> <li>Pentobarbital</li> </ul> </li> <li>Local               <ul style="list-style-type: none"> <li>Tetracaine</li> <li>Procaine</li> <li>Lidocaine</li> <li>Dibucaine</li> </ul> </li> </ul>	March 1972
14/764	Hypnotics <ul style="list-style-type: none"> <li>Barbiturates</li> <li>Non-barbiturates</li> </ul>	Sept. 1967

<u>Analysis Number</u>	<u>Analysis Subject</u>	<u>Data as of</u>
15/958	Psychotropic Drugs Central Nervous System Stimulants Methamphetamine Amphetamine Methaqualone Anti-Depressants Imipramine Isocarboxazid Amitryptyline Desipramine Doxepin Minor Tranquilizers Meprobamate Chlordiazepoxide Diazepam Prochlorperazine Major Tranquilizers Chlorpromazine Promazine Fluphenazine Decanoate Thioridazine Thiothixene Anti-Parkinsonism Drugs Levodopa	Sept. 1974
16/811	Narcotics: Opium Derivatives & Synthetics Opium Derivatives Morphine Hydromorphone Ethylmorphine Codeine Hydrocodone Synthetics Pethidine Anileridene Methadone Alphaprodine Levorphanol	Sept. 1968
17/801	Blood Collecting & Dispensing Apparatus Blood Donor Sets Blood Recipient Sets Bags (Plastic) for Collecting, Dispensing & Storing	Sept. 1968

<u>Analysis Number</u>	<u>Analysis Subject</u>	<u>Data as of</u>
18/867	Blood Grouping & Typing Sera Anti-A, Anti-B, Anti-AB Anti-D (Anti-RH <sub>O</sub> ) 22% Bovine Albumin Anti-Human Globulin	Dec. 1970
19/968	Blood Plasma, Human, Protein Derivatives Albumin Powder from Plasma Albumin Powder from Placenta Normal Serum Albumin, 5% Normal Serum Albumin, 25% Plasma Protein Fraction Immune Serum Globulin RH <sub>O</sub> (D) Immune Globulin Tetanus Immune Globulin Antihemophilic Factor Factor IX Complex Fibrinogens	June 1976
20/974	Dextran, Blood Plasma Volume Expander	May 1977
21/970	Intravenous Solution Containers Glass and Plastic	
22/802	Thermometers (Clinical)	Sept. 1968
23/823	Surgical Instruments	June 1969
24/746	Surgical Dressings	March 1967
25/765	Surgical Sutures	Sept. 1967
26/762	Surgeons Needles	May 1967
27/889	Diagnostic Instruments (Illuminated)	December 1971
28/760	Hypodermic Needles	May 1967
29/761	Hypodermic Syringes	May 1967
30/629	X-Ray Machines and Tubes General Equipment X-Ray tubes and valves	June 1963
31/836	Sterilizers, Hospital (autoclaves)	Sept. 1969
32/656	Lamps, Medical, Surgical, Dental	July 1964

While the Board remains intact and does meet from time to time (most recently in the late summer of 1981), the staff that initiates and conducts industrial analyses was essentially eliminated as of October 1, 1981. For all intents and purposes, therefore, there is currently no activity in this type of data collection or analyses. Considering that the bulk of the data on file is substantially out of date, this could have a serious impact on the decision-making process both in terms of planning and in actual operational management of a major health/medical national crisis.

### 3. Other Available Data

In addition to the data base available through IEB analyses the Federal Government maintains health/medical information collected from a variety of other sources. These, along with the IEB data, are maintained at classified relocation sites and are available for use in test exercises as well as emergency management operations. The following is a brief description of these additional files. The file data source category and the year in which the data was collected is given in each case.

- o Drug Manufacturers, Data Source Category MSI represents data circa 1977. The file contains three categories of drug manufacturers. It provides the number of employees, the value of shipments and the percentage of national output for 15 producers of biological products (SIC-2831), 16 producers of medicinals and biological products, (SIC-2833), and 106 producers of pharmaceutical preparations (SIC-2834). The file does not include any type of product identification and much of the information included was developed through extrapolations as opposed to specific survey instruments as used in the IEB data collection process.
- o Medical Equipment Industries, Data Source Category MSI represents data circa 1977. This file provides employees, value of shipments and percentage of national output for 24 producers of optical instruments (SIC-3832), 52 producers of surgical and medical instruments (SIC-3841), 59 producers of surgical appliances and supplies (SIC-3842), and 15 producers of dental

equipment and supplies (SIC-3843). This file has the same limitations as noted in the drug manufacturers' file.

- o Manufacturers of Essential Medical Items, Data Source Category HHS, represents data circa 1969. This file provides the location only of 39 manufacturers of medical survival items. Since only 39 sites are listed, it would appear that corporate headquarters as opposed to actual production site is recorded. This file provides no information as to type or quantity of product produced.
- o Medical, Data Source Category HHS, is a file which includes a variety of selected medical facilities. The currency of the data is undetermined but it is assumed to be very much out of date. The file provides location only for:

<u>No. of Facilities</u>	<u>Type of Facility</u>
26	Blood Bank - American Association
60	Red Cross Blod Facilities
5	National Institutes of Health Facilities
50	Public Health Service Indian Hospitals
1	Public Health Service Hospital
1	Public Health Service Medical Supply Depot

## H. Disaster Health Preparedness at the Regional and State Level

### *Regional Level*

The PHS has designated an Emergency Coordinator in each of the ten HHS regional offices. Just as at the Federal level, the regional emergency coordinator is the focal point for Disaster Health Preparedness Planning. Each region is supposed to have a health/medical component in its overall HHS Disaster Plan. Since regional management capability would be very important in a nuclear attack environment it follows that each region should be as self-sufficient as possible regarding immediate access to data for health facilities, manpower and supplies within the region. It also follows that continuing close liaison with state health disaster groups should be maintained.

The basic concept of National Civil Defense policy is and has always been that the state governments exercise a major role in both planning for and operational management of crisis situations. The Federal role is one of partnership, providing guidance as to overall policy and resources as necessary to augment state and local capability. In the health field this historically took the form of Federal medical stockpiles and substantial assistance in the form of planning guides, matching salary funds for state health disaster planners, technical manuals, training programs, damage assessment techniques, casualty prediction procedures, mass casualty management policy and health resources management guides. Regional offices played a major role in disseminating this information and providing technical assistance to the states. In this light, it should be noted that HHS is in the process of significantly reducing its regional office structure.

Regional Health Disaster Planning activity phased down in 1973 along with the dismantling of the PHS-Division of Emergency Health Services. Health disaster staff became closely involved with the administration of Emergency Medical Services System grants and little attention was given to "Disaster Planning." With the recent advent of block grant funding for EMSS the regional office activity in this area has almost disappeared. The only activity remaining is the close-out work associated with previous grants.

Columns 1 through 4 of Figure IV-7 present a brief summary of health disaster planning activity at the 10 HHS regional offices.

The PHS component of the regional disaster plans (Column 1) seems to be relatively current. Both HHS and FEMA have revived considerable interest in updating all components of the overall Federal regional disaster plans.

The time spent on Regional EMSS activity (Column 3) varies from one full time equivalent to none. This low level of activity is in line with the new EMSS block grant funding policy which essentially circumvents the requirement for regional office monitoring, etc.

The time spent on Regional Health Disaster Planning (Column 2) activity needs to be clarified. The data presented is the fraction of time spent by the person designated as the PHS emergency coordinator. The time devoted to health disaster planning by the entire regional office staff has not been documented. The impression is, however, that not much is taking place. This is probably due to the fact that the regional offices are essentially administrative in nature. The technically qualified PHS professionals are either in the central office or with CDC in Atlanta.

The column entitled "Last Written Guidance" also needs clarification. This refers to specific pre-crisis written guidance sent out from PHS in Washington to the regional office for the express purpose of providing specific direction as to the Federal Health Disaster Response Policy and specific assistance guidance in the form of manuals and other technical data to be used at the regional level and also distributed as appropriate to the various states. In most instances the last guidance received could not be remembered. The general response was 1973-1974 which was when the Division of Emergency Health Services was dismantled. As opposed to the above type of written guidance, the regional offices have received model disaster plans, various communications concerning participation in exercises and periodic requests for reports on the status of regional health disaster planning activity.

The Prepositioned Data column refers to whether or not regional health resources data is actually prepositioned at the appropriate relocation site. None of the regions have current prepositioned health/medical emergency response data. In all cases, the data which is prepositioned is the same

FIGURE IV-7  
REGIONAL HEALTH DISASTER PLANNING ACTIVITY

Region	Date of Current PHS Component to Regional Disaster Plan (1)	FTE on Disaster Health Planning (2)	FTE on Emergency Medical Services (3)	Last Written Guidance (4)	Prepositioned Data (5)
A	1981	0.30	None	1973	Yes (Old Data)
B	1979	0.10	1.00	1974	Very Little (Old)
C	1981	0.10	0.15	1973	Unknown
D	1980	0.10	None	1973	Very Little (Old)
E	1980	0.02	None	1974	Very Little (Old)
F	1979	0.05	0.05	1973	Very Little (Old)
G	1976	0.10	0.10	1974	No
H	1981	0.15	0.10	1974	No
I	1981	0.05	None	1974	No
J	1976	0.05	None	1973	Very Little (Old)

- (1) This date refers to the PHS component of the Regional HHS Disaster Plan.
- (2) This refers to the Full Time Equivalent (FTE) Manpower Time devoted to Health Disaster Planning by the PHS Regional Office Emergency Coordinator.
- (3) This refers to the FTE manpower devoted to Emergency Medical Services Systems Activity at the Regional Office.
- (4) This refers to the last remembered specific written guidance on Health Disaster Planning received from PHS Central Office. This excludes the recent circulation of a Model Regional Plan and the communications relevant to the exercise on refugees and repatriation.
- (5) This refers to data actually prepositioned at the Regional EOC or its PHS equivalent.

outdated material held by the Federal government. Some of the regions do in fact have access to more current information, but it is not prepositioned nor is it necessarily immediately available for emergency applications.

In summary and as expected, regional health disaster planning has paralleled the diminished activity at the Federal level.

#### *State Level*

Health disaster preparedness at the state level involves several areas of activity: (1) Health disaster planning per se, (2) Radiological health (nuclear accident) contingency planning, and (3) Emergency Medical Services Systems (EMSS) activity. The data presented here excludes Radiological Health Activity and includes the other two only in terms of state level activity. The substantial local EMSS and some local health disaster preparedness planning effort is not included in the estimates presented. The personnel allocations are based on state employees only.

Figure IV-8, State Planning and Manpower Allocations, includes data on all but four of the continental U.S. states. The states are numbered from 1 through 48 and are not necessarily in alphabetical order. The information was derived from direct conversations with state health department personnel. NOTE: The level of effort in terms of Full-Time Equivalents (FTE) applies only to health department personnel. It is recognized that state emergency management or emergency services offices also do a certain amount of health disaster planning in the process of developing state-wide emergency disaster plans. This, however, is difficult to estimate and in any event the basic input is almost always supplied by the state health department.

The data on Figure IV-8 is arranged in four columns. The first refers to the year of the most recent review (and update) of the "Health Annex" to the state disaster plan. It appears that most states have kept their disaster health planning documents current. NOTE: No attempt was made to assess the content or the quality of the plans or any updates to them.

The second column refers to the FTE personnel allocation (within the health department applied to health disaster planning activity (excluding Radiological Health). This varies from state to state. Some of the variation is probably due to different interpretations of Health Disaster Planning. This is particularly true of the state which reported 19 FTE's. In most states, health disaster planning is carried on by a number of people within the health department. Usually there is no single person who devotes full time to this task. For this reason it is difficult to be precise in determining the FTE personnel allocation. An additional complicating factor is that in some instances the disaster planning activity is the responsibility of the EMSS staff and in others it is delegated to health department staff outside the EMSS group. Considering these limitations on accuracy it is important to note that most of the estimates fall into a range which appears to be consistent across the country. In some cases, no estimates could be made and this is indicated on Figure IV-8 as N/A (not available). The general response was that health disaster preparedness planning was not receiving the attention that it should.

The third column includes the state level FTE personnel allocation to all aspects of the administration and management of Emergency Medical Services Systems within the state. This varies also, but the overall level is much higher than that devoted to health disaster planning.

A point to note is that even though Federal funding for EMSS activity has been reduced and put into the block grant process, it appears that state level involvement in the EMSS concept is holding firm. Apparently some reduction in force has taken place but the general view is that the states will carry on with the activity. This speaks well for the initial Federal involvement in the concept and the quality of leadership and planning which was provided by Federal level EMSS program staff.

The last column gives some indication as to the relative level of EMSS activity in terms of population. For example, State Number 1 employs one EMSS (FTE) for each 744,000 persons in the state. States numbered 13, 20 and 41 contract out much of their EMSS program activity; therefore, the high figures are misleading. States numbered 3, 13 and 39 have no EMSS grant activity at the state level.

FIGURE IV-8  
STATE PLANNING AND MANPOWER ALLOCATIONS

<u>State</u>	<u>Year of Current Plan</u>	<u>Health Disaster FTE's Planning</u>	<u>Emergency Medical Services Systems FTE's</u>	<u>People in State per each Em. Med. Serv. System FTE (000)</u>
1	1978	0.12	5.00	744
2	None	0.15	15.00	155
3	1982	0.05	0.00	---
4	1979	3.00	9.00	2,446
5	1980	0.50	9.00	291
6	1981	N/A	18.00	171
7	1982	0.10	2.85	202
8	1979	N/A	12.00	708
9	1981	N/A	17.00	295
10	1982	0.25	10.00	87
11	1980	0.50	20.00	560
12	1979	1.00	15.00	357
13	1978	0.20	0.00	---
14	1980	2.00	2.00	1,161
15	1981	0.50	5.00	692
16	1980	0.15	17.00	231
17	1976	0.10	5.00	216
18	1978	0.25	67.00	61
19	N/A	N/A	N/A	N/A
20	1982	2.00	4.00	2,294
21	1981	1.00	15.00	267
22	1982	0.50	7.00	340
23	1981	2.00	24.00	201
24	1978	0.50	10.00	78
25	1981	2.00	5.00	310
26	1980	0.25	5.50	118
27	1981	0.75	22.00	39
28	1982	7.00	10.00	730
29	1980	0.20	22.00	54
30	1981	N/A	N/A	N/A
31	1979	1.00	42.00	130
32	1981	0.05	7.00	91
33	1981	1.00	10.00	1,073
34	1982	0.50	11.00	259
35	1980	0.10	5.00	488
36	1982	4.00	10.00	1,174
37	1981	2.00	11.00	84
38	1982	1.50	16.50	172
39	1980	0.50	0.00	---
40	1982	1.50	15.00	289
41	1982	7.00	2.50	5,147
42	1979	0.50	16.00	81
43	N/A	N/A	N/A	N/A
44	1982	2.00	15.00	332
45	1979	0.50	4.50	872
46	1980	1.00	3.00	619
47	1982	19.00	11.00	425
48	1981	3.00	6.00	70

While EMSS activity is going well, there appears to have been a serious breakdown in communication and information transfer between Federal PHS regional staff and individuals responsible for health disaster planning within state health departments. The general comment at the state level was that planning assistance and other forms of policy guidance were non-existent. In several instances this opinion was reinforced by the fact that regional PHS staff were unaware of the names of state disaster health officers in their own region. This lack of activity is of course no fault of the PHS regional staff. They are merely reflecting the lower level of health disaster planning emphasis and priority which has been the policy of the Federal Government since 1973.

In summary, state EMSS activity remains strong. State health disaster preparedness planning per se, with a couple of exceptions, is not being addressed adequately.

## V. PROJECTED CIVILIAN HEALTH MOBILIZATION PLANNING

The health working group of the newly created Emergency Mobilization Preparedness Board (EMPB) represents a serious government effort to evaluate the potential health/medical problems which would exist in the event of a major national disaster. It is assumed that the activity of the group will result in an updated government policy position both in terms of problem definition and mitigation.

### A. Discussion

A central factor which will govern health mobilization activities is that the overwhelming proportion of the health resources of the country are not under direct government (Federal and state) control, and therefore collaboration with and support from the health professional organizations and the health industry will be essential.

An additional factor which needs to be considered is the overall philosophical approach to the planning process. A major historical problem in Emergency Health/Medical Planning has been the tendency in both government and the professions to plan for the care of an estimated number of casualties by projecting the resources which would be required on the basis of existing pre-crisis medical practice and standards. With such a planning approach the availability of resources falls so far short of the requirement that the planning in itself appears to be pointless. It also provides opponents of emergency planning with good data to demonstrate the futility of the planning process.

A more positive approach is the concept of basing planning on estimates of surviving resources (rather than anticipated casualties) and optimum application of those resources in providing service to the injured but perhaps more importantly to the uninjured who would be essential to the survival of the Nation. A strong case can be made to justify pre-crisis health/medical preparations in terms of both the quantity and the quality of survival.

The potential diversity of the post-attack environment establishes the rational for advance planning. After any conceivable level of nuclear attack there would be substantial areas which had not experienced direct weapon effects. This is a critical point because the severest health resource distribution problems arise just because such undamaged areas would exist. Were all areas and population centers and all productive equipment assumed to be equally attacked with equal success on some horizontal percentage-of-success scale, then all subsequent control problems could be based on uniform local conditions. This would pose, paradoxically, a much simpler task. It is precisely the extreme differences between undamaged and heavily-damaged areas which would glaringly dramatize the complexity of medical resource control. Management of resources in untouched areas might require more careful thought in advance than dealing with the problems in heavily damaged areas. For example, undamaged areas would come under great pressure to rush to the assistance of others. Local officials might tend to inappropriately allocate medical resources to areas unable to apply them effectively.

#### B. Mobilization Planning

Obviously, the overall Federal Health Mobilization Planning Policy objective is to improve our National capacity to respond to the health/medical requirements associated with a range of potential disaster situations up to and including those associated with general war. Implementation of the policy objective requires the development of management procedures to coordinate the various interrelationships at the Federal level as well as the provision of guidance to state and local governments in the development of their emergency plans for health resource management.

Health Mobilization activity should include an integrated plan for the management of both public and private resources in terms of health manpower, facilities and supplies. Since the process requires an on-going understanding of legal authorities under a range of emergency situations,

the technical legal aspects of operational management and emergency requisition procedures need to be addressed throughout the planning process.

One of the first steps in the health mobilization process should be the establishment of integrated mobilization objectives, priorities and activities which are based on:

Utility - Will it produce a use product?  
Who will use it and how?

Feasibility - Is it technically possible to implement?

Affordability - Could it be funded?

Commitment - Does it have enough top government support  
to make it happen?

The following pages outline suggested mobilization planning activities.  
The material is subdivided into four areas of interest.

1. National Emergency Health/Medical Planning
2. National Emergency Health Manpower
3. National Emergency Health Facilities
4. National Emergency Health/Medical Supplies.

## 1. National Emergency Health/Medical Planning

This section includes mobilization planning activity not specifically identified with manpower, facilities or supplies. If the Government is serious in its effort to improve our national response capability, the following tasks need to be addressed.

-- *Establishment of a National Emergency Health/Medical Clearinghouse.*

Data on both public and private health/medical resources are not monitored by any one department, agency or office of government. There is no single focal point from which to overview the entire range of existing public and private health resources. A national clearinghouse would serve this much needed function. It need not be large in terms of staff since existing agencies and offices could be tasked to provide the necessary data. The clearinghouse would simply serve as the central repository for all health/medical information which has any bearing on health mobilization planning or on the emergency management of the health/medical aspects of any disaster situation.

-- *Development of a National Emergency Health/Medical Resources Management Plan*

Even though the PHS-Emergency Health Service Concept provides the administrative structure to implement a plan, there is no national level, coordinated health/medical plan to respond to a major crisis situation. Such a plan needs to be prepared. It should be developed with the full participation of industry and all appropriate health professional organizations as well as those agencies of government (Federal, state and local) which have health related responsibilities. The plan should address the coordinated national response in the emergency management and application of both private and public health

manpower, facilities and supplies including inter-agency claimancy. The Civilian Military Contingency Hospital System (CMCHS) which is currently being envisioned as an adjunct to civilian as well as military emergency medical care might well serve as the nucleus for a national resources management plan.

-- *Review Inter-Agency Agreement*

Inter-Agency agreements and memoranda of understanding should be reviewed and revised if appropriate, in the light of current health mobilization planning activity.

-- *Establishment of Regional Mutual Assistance Areas*

The Health Planning and Resources Development Act of 1974 established a network of Health Systems Agencies (HSA's) throughout the country, usually several per state. The HSA's were set up as health care delivery planning groups. The law provided that each HSA area must be a geographic region appropriate for effective planning and development of health services determined on the basis of factors including population and the availability of resources to provide all necessary health services for the residents of the area.

In theory then each HSA could be regarded as a self-sufficient medical resource area. Even though Federal funding for continued HSA activity has been reduced or eliminated, National Health Mobilization planning should consider the possible incorporation of defined HSA areas as regional civil defense mutual assistance areas. The HSA area could feasibly be the basic geographic building block for emergency Health/Medical resources management planning.

## 2. National Emergency Health Manpower Analysis

While current data on file needs to be updated, the existing format as to type of health professional, location and practice speciality appears to be adequate. The file should include all private civilian manpower as well as Federal commissioned officers both active and reserve. Civilians who hold inactive reserve status (DOD or PHS) should be specifically identified. Once the manpower file is updated, a series of analyses would be useful.

- Manpower requirements under a range of emergency situations in terms of numbers, and types needed.
- Short and long term manpower shortfalls for routine and emergency operating conditions. This should include a review of Volumes I through VII of the 1980 "Report of the Graduate Medical Education National Advisory Committee (GMENAC) to the Secretary of HHS and the 1980 PHS/HRA report on "Evaluation of Health Manpower Shortage Area Criteria."
- Interagency competing commitments and requirements. This is of particular importance when considering the non-military allocation of DOD health manpower.
- Adequate professionals for direction and emergency management of health manpower.
- Geographic distribution (imbalances) of available manpower.
- The expanded role of non-physician health professionals under emergency operating conditions.
- Legal liabilities under emergency practice situations.
- Impact on National health economy following call-up of Federal uniformed services reserves.
- Manpower mobilization implementation procedures.

### 3. National Emergency Health Facilities Analysis

As with manpower, the existing file on facilities is probably adequate in format but not currency. Useful additions to the format, however, would be major outpatient clinics, the identification of emergency hospital relocation sites and documentation of the normal operating inventory (days) on hand. Analysis of the updated facilities file might include:

- Vulnerability and rapid damage assessment capability.
- Expansion capacity and increased medical supply requirements per "x" unit of expansion.
- Disaster plans in place and tested.
- Existing and potential communication links between facilities and with controlling government emergency operating centers.
- Identification of a range of special service facilities (i.e., burns, radiation, toxic exposures, etc.).
- Transportation logistics (planes, trains, roads, heliports, etc.) associated with special service facilities.
- Capability for rapid rehabilitation of health facilities after a range of crisis events.
- Estimation of excess supporting service requirements in increments of 100 beds to various types of general and specialized medical care facilities (i.e., utilities, transportation, supplies and services).

### 4. National Emergency Health/Medical Supplies Analysis

The existing data file on supplies is not only very much out of date, it is also inadequate in format. The necessary information is not there. The supplies analysis should begin with the identification of selected specific items thought to be crucial to emergency medical operations. The list should be as short as is compatible with

basic austere medical practice. The file should be updated to include the location and normal inventory levels of the above selected items of drugs, biologicals, supplies and equipment in standardized format at:

Veterans Administration Depots and Warehouses  
Department of Defense Depots  
Manufacturing Sites  
Warehouses  
Wholesalers  
Retailers  
Pharmacies

The file should include sufficient information to allow the following types of analyses to be performed.

- Review of the requirement for and feasibility of the development of a National medical stockpile.
- Determination of deficiencies and geographic imbalances of individual survival items and procedures for augmentation and redistribution under emergency situations.
- Plans for controlled allotment and distribution for government and civilian health resources including time-phased per capita survival item requirement factors under a range of potential emergency operating environments.
- Emergency pre-crisis dispersion potential of selected items.
- Emergency requisition procedures.
- Documentation of routine and emergency expanded production capacity.
- Identification of sole source manufacturer of key items.

- Dependence on foreign imports for product development.
- Attack vulnerability analysis.
- Post attack production capacity.
- Procedures and guidelines for salvage of supplies and equipment after attack.
- Feasibility of developing computer models for conversion of end-item requirements to raw or basic industry resources needed for production of:
  - o Drugs, biologicals, and reagent chemicals
  - o Surgical dressing materials
  - o Surgical, medical, and dental instruments, equipment, and supplies
  - o X-Ray equipment and supplies
  - o Hospital equipment, utensils, and supplies
  - o Opticians instruments, equipment, and supplies
  - o Diagnostic instruments and laboratory equipment.

## VI. ADDITIONAL STUDY REQUIREMENTS

The civil defense related medical research sponsored by FEMA and its predecessor organization(s) between 1971 and 1981 covered the following main subject areas.

- o Five studies (all interrelated) on the biological effects of ionizing radiation.
- o Seven studies on Emergency Health Care Systems.
- o Seven studies on post attack health and medical care problems.
- o Two studies on health resource analysis and one study on burn therapy.

The health and medical study requirements in support of FEMA's current planning and operational responsibilities can be divided into several components.

1. Health Mobilization Planning
  - manpower
  - facilities
  - supplies
2. Biological Effects of Ionizing Radiation
3. Health Systems in Crisis Relocation
4. Non War-Related Emergency Health Services in
  - natural disasters
  - hazardous spills
  - nuclear power plant accidents
5. Emergency Health Services in General War
  - casualty prediction techniques
  - emergency medical services
  - post attack health and medical services

### 1. *Health Mobilization Planning*

The types of studies required in support of health mobilization planning were outlined in Section V and will not be repeated.

## *2. Biological Effects of Ionizing Radiation*

While basic research on the biological effects of ionizing radiation is clearly of interest to FEMA, it is primarily the task of other agencies of government (DOD, DOE, NIH) funded for that specific purpose. In any event, the Biological Research Extension Act of 1978 (P.L. 95-622) specifically provides for the establishment of an Interagency Radiation Research Committee to develop the Federal Strategy for Research into the Biological Effects of Ionizing Radiation. FEMA's representation on the interagency committee is probably the extent to which it should get involved. Further FEMA funded research on the biological effects of ionizing is not warranted.

## *3. Health Systems in Crisis Relocation*

Crisis Relocation Planning (CRP) of course involves all aspects of support requirements with health and medical care being of significant importance. FEMA has conducted studies in this area and the general conclusions were that, at least in the areas studied, an acceptable health care system could be developed under crisis relocation conditions. Issues which need further study include:

- Management of patients unable to be relocated
- Acquisition, allocation, relocation and management of medical manpower and supplies
- Methodology for selection and acquisition of alternate (relocated) operating sites for medical care facilities
- Methodology for medical command, control and communication
- Policy on delivery of medical care in terms of reduced services and standards (i.e., austere medical care).

## *4. Non War-Related Emergency Health Services*

Emergency health services in crisis situations short of a major West Coast earthquake or general war are manageable on the basis of current standards and medical practices, recognizing of course that

they must be backed by feasible health disaster response plans. In this regard a fruitful study area for FEMA to pursue would be a review of health related disasters for purposes of documenting and collating both the strengths and weaknesses of health care disaster planning as it was actually applied operationally. There is a wealth of documentation on this subject. Compiling the information into a single document would be of significant help to health disaster planners at all levels. It would essentially be a medical disaster response manual based on a wide range of actual crisis management experience. The effort should focus on emergency medical management as opposed to being limited to emergency medical services per se.

Another applicable study area, which is essentially a subset of the above review process, is the documentation of the types of injuries (quantitatively and qualitatively) generated by different crisis events. This would not only be useful in disaster planning, it may well suggest preventative techniques and procedures to mitigate against future events. In addition to natural disasters, this documentation should cover man generated events such as nuclear accidents, improper hazardous waste disposal, toxic spills, civil disturbances, etc.

At this point it is appropriate to note that many existing EMSS organizations are beginning to address "disaster linkage" in their internal planning activity. The above mentioned medical disaster response manual would be of significant current utility to hundreds of EMSS groups which are beginning to address health/medical disaster management issues.

Health/medical care planning for the emergency response to an earthquake with the simultaneous generation of up to 100,000 seriously injured persons represents quite a task. Since definitive medical care would not be possible initially, areas subject to such a massive threat should plan in terms of varying levels of appropriate response.

One approach to this type of planning is a crisis response planning and management concept which was introduced into civil defense thinking some

years ago. It involves a crisis management process based on the identification of several levels of emergency operating situations. It is particularly applicable to the planning and management of the medical response to a major earthquake. The overwhelming cause of injury in earthquakes is of course the quake itself with all its attendant physical damage. The second most important cause of injury is probably the resultant fires. If a major quake took place over a relatively large area (several counties) one would not expect uniform damage across the area. Any given subset of the overall area may have low, medium or high direct casualties and simultaneously the same subset may be undergoing either a low, medium or high fire problem. Using these two units of measure as an indication of the problem level in a given area, one can develop a simple matrix to quickly describe the operating environment and therefore the operational response appropriate in the specific area. Figure VI-1, Emergency Medical Operating Situations (EMOS) describes the concept. Each EMOS numbered one through nine represents a separate problem level. Each geographic subset of the affected area could be categorized as being in one of the nine possible operating situations.

Figure VI-1  
EMERGENCY MEDICAL OPERATING SITUATIONS  
FIRE

		Low	Medium	High
C A S U A L T I E S	Low	EMOS 1	EMOS 2	EMOS 3
	Medium	EMOS 4	EMOS 5	EMOS 6
	High	EMOS 7	EMOS 8	EMOS 9

From a management point of view it is important to note that the EMOS at any point in time is not static. It may change depending on fire spread and the subsequent generation of additional fire related casualties. This type of simple descriptive problem assessment would clearly be of immediate operational value to all elements of an emergency response team. Its applicability to the medical care emergency management process and therefore the reason it is included herein is its utility as a geographic triage device.

The application of medical resources during emergency operations should be governed by cost/benefit value judgments. They should be applied in areas where their application has the best chance of improving the survival rate both quantitatively and qualitatively. From this point of view (in terms of a major earthquake) the study areas of interest to FEMA would involve the definition of low, medium and high casualty and fire levels and the development of guidelines for resource allocation under each of the nine potential emergency medical operating situations. The resource allocation guidelines should include manpower as well as equipment and supplies.

##### *5. Emergency Health Services in General War*

Emergency health service requirements in general war can be separated into two major categories; the first being emergency medical services in response to initial casualties and the second being the longer term health and medical services required during the post attack recovery period. Many studies in these areas have been conducted over the past 15-20 years. Much of the information generated is still applicable particularly in reference to the post attack recovery process; however, advanced weapon systems have probably outdated much of the earlier work on physical damage assessment and casualty prediction techniques.

In addition to the many war-related health mobilization issues discussed in Section V, further health/medical study areas which need to be addressed

in regard to national crisis contingency planning are:

- o Evaluation of damage assessment models for accuracy of input assumptions for both health resources and casualty prediction techniques
- o Trans and post attack policy and procedures on augmentation, distribution, allocation and application of health resources. This type of pre-crisis guidance is vital to the development of a meaningful national health care disaster plan. It is noteworthy that not only does it not now exist but that it has never existed in the sense of established national policy.
- o Analysis of competitive military/civilian claims on health resources both in terms of potential conventional or nuclear war situations.
- o To avoid unnecessary replication of effort, all civil defense related health/medical studies completed within the last 20 years should be reviewed and evaluated in terms of current applicability. Much of this past work remains valid as it stands. Other work could be updated with minimal effort. Savings realized with respect to current mobilization planning activity could be substantial.
- o Review current technology in biological and chemical warfare to determine civil defense related countermeasure requirements. This review should consider the threat as it may exist from terrorist activity as well as general war.
- o The ever increasing potential of a terrorist related nuclear incident needs to be evaluated in terms of current contingency planning and countermeasure capabilities.

**APPENDIX A**

**STATE SUMMARY OF  
HEALTH AND MANPOWER FACILITIES**

## ALABAMA HOSPITALS

Percent Occupancy 75.6

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	85		
Army	3	169		
Navy				
Veterans Administration	3	1,665	1	683
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	7	1,919	1	683
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	71	8,040	3	3,116
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	39	7,828	1	128
For Profit	22	3,059	3	215
Other	1	44		
SUBTOTAL	62	10,931	4	343
<b>TOTAL</b>	140	20,890	8	4,142

## ALABAMA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY		14			61			75	
NAVY									
AIR FORCE		9			13			22	
PHS (Comm. Corps)		1			14			15	
VA FULL TIME		10	2		82	2		92	
VA PART TIME		18	1		69	1		87	
CIVILIAN (Active)	17	1,403	67 20	3,009	84 20	4,412			
CIVILIAN (Inactive)							196		
CIVILIAN (Unknown)							222		
<b>TOTAL</b>	<b>17</b>	<b>1,455</b>	<b>70 20</b>	<b>3,248</b>	<b>87 20</b>	<b>5,121</b>			

NURSES RN	<u>10,828</u>	PODIATRISTS	<u>16</u>
NURSES LPN	<u>8,398</u>	OPTOMETRISTS	<u>179</u>
DENTISTS	<u>1,176</u>	PHARMACISTS	<u>1,639</u>
VETERINARIANS	<u>485</u>	MEDICAL SCHOOLS	<u>2</u>

M.D. GRADUATES PER YEAR 171

## ALASKA HOSPITALS

Percent Occupancy 57.4

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	206		
Army	1	80		
Navy				
Veterans Administration				
Indian Health (PHS)	6	363		
Department of Justice				
Other				
SUBTOTAL	8	649		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	5	161	1	133
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	11	792		
For Profit				
Other				
SUBTOTAL	11	792		
<b>TOTAL</b>	<b>24</b>	<b>1,602</b>	<b>1</b>	<b>133</b>

## ALASKA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY		6			13			19	
NAVY									
AIR FORCE		9			37			46	
PHS (Comm. Corps)		20			82			102	
VA FULL TIME					1			1	
VA PART TIME									
CIVILIAN (Active)	1	6	125	11	16	284	12	22	409
CIVILIAN (Inactive)									15
CIVILIAN (Unknown)									44
<b>TOTAL</b>	<b>1</b>	<b>6</b>	<b>160</b>	<b>11</b>	<b>16</b>	<b>417</b>	<b>12</b>	<b>22</b>	<b>636</b>

NURSES RN	<u>1,776</u>	PODIATRISTS	<u>3</u>
NURSES LPN	<u>400</u>	OPTOMETRISTS	<u>18</u>
DENTISTS	<u>176</u>	PHARMACISTS	<u>118</u>
VETERINARIANS	<u>42</u>	MEDICAL SCHOOLS	<u>0</u>

M.D. GRADUATES PER YEAR 0

## ARIZONA HOSPITALS

Percent Occupancy 72.7

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	3	195		
Army	1	65		
Navy				
Veterans Administration	3	1,173		
Indian Health (PHS)	9	569		
Department of Justice				
Other				
SUBTOTAL	16	2,002		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	10	1,531	1	373
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	43	6,804	2	123
For Profit	7	602	1	38
Other				
SUBTOTAL	50	7,406	3	161
TOTAL	76	10,939	4	534

## ARIZONA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL			
	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	
ARMY				6			21			27
NAVY							9			9
AIR FORCE				18			52			70
PHS (Comm. Corps)				30			146			176
VA FULL TIME	2			13	9		116	11		129
VA PART TIME	1			25			15	1		40
CIVILIAN (Active)	30	4		1,225	96	68	3,083	126	72	4,308
CIVILIAN (Inactive)										700
CIVILIAN (Unknown)										228
<b>TOTAL</b>	<b>33</b>	<b>4</b>		<b>1,317</b>	<b>105</b>	<b>68</b>	<b>3,442</b>	<b>138</b>	<b>72</b>	<b>5,687</b>

NURSES RN	<u>591</u>	PODIATRISTS	<u>55</u>
NURSES LPN	<u>152</u>	OPTOMETRISTS	<u>146</u>
DENTISTS	<u>1,037</u>	PHARMACISTS	<u>1,230</u>
VETERINARIANS	<u>346</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 86

## ARKANSAS HOSPITALS

Percent Occupancy 70.5

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	2	50		
Army				
Navy				
Veterans Administration	2	1,711		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	4	1,761		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	50	3,876	1	418
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	32	5,614		
For Profit	9	948		
Other				
SUBTOTAL	41	6,562		
<b>TOTAL</b>	<b>95</b>	<b>12,199</b>	<b>1</b>	<b>418</b>

## ARKANSAS

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY								2				2
NAVY												
AIR FORCE				5				28				33
PHS (Comm. Corps)				1				7				8
VA FULL TIME	2			8	6			103	8			111
VA PART TIME				23				18				41
CIVILIAN (Active)	11	2		662	31	12		1,812	42	14		2,474
CIVILIAN (Inactive)												187
CIVILIAN (Unknown)												112
<b>TOTAL</b>	<b>13</b>	<b>2</b>		<b>699</b>	<b>37</b>	<b>12</b>		<b>1,970</b>	<b>50</b>	<b>14</b>		<b>2,968</b>

NURSES RN	<u>5,776</u>	PODIATRISTS	<u>19</u>
NURSES LPN	<u>5,008</u>	OPTOMETRISTS	<u>156</u>
DENTISTS	<u>667</u>	PHARMACISTS	<u>957</u>
VETERINARIANS	<u>276</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 122

## CALIFORNIA HOSPITALS

Percent Occupancy 70.0

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	8	678		
Army	2	560		
Navy	5	1,260		
Veterans Administration	10	6,259	1	450
Indian Health (PHS)	1	17		
Department of Justice	2	67		
Other				
SUBTOTAL	28	8,841	1	450
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)	1	260		
<b><u>STATE OR LOCAL GOVERNMENT</u></b>				
	111	16,648	13	16,336
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	240	48,682	7	2,394
For Profit	159	17,374	22	1,755
Other	18	3,000		
SUBTOTAL	417	69,056	29	4,149
TOTAL	557	94,805	43	20,935

## CALIFORNIA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL		IN RESERVES	TOTAL		IN RESERVES	TOTAL	
	DOD	PHS		DOD	PHS		DOD	PHS	
ARMY		67			341			408	
NAVY		112			894			1,006	
AIR FORCE		97			319			416	
PHS (Comm. Corps)		2			60			62	
VA FULL TIME		60	18		729	18		789	
VA PART TIME	7	129	6		381	13		510	
CIVILIAN (Active)	173	25	12,639	348	347	35,321	521	372	47,960
CIVILIAN (Inactive)									4,534
CIVILIAN (Unknown)									2,693
<b>TOTAL</b>	<b>180</b>	<b>25</b>	<b>13,106</b>	<b>372</b>	<b>347</b>	<b>38,045</b>	<b>552</b>	<b>372</b>	<b>58,378</b>

NURSES RN	<u>89,692</u>	PODIATRISTS	<u>757</u>
NURSES LPN	<u>35,535</u>	OPTOMETRISTS	<u>2,412</u>
DENTISTS	<u>12,991</u>	PHARMACISTS	<u>9,566</u>
VETERINARIANS	<u>2,900</u>	MEDICAL SCHOOLS	<u>8</u>

M.D. GRADUATES PER YEAR 924

## COLORADO HOSPITALS

Percent Occupancy 69.0

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<u>FEDERAL GOVERNMENT</u>				
Air Force	1	75		
Army	2	710		
Navy				
Veterans Administration	2	533	1	441
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	4	1,318	1	441
<u>FORMER FEDERAL (PHS)</u>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	31	2,485	2	1,103
<u>NON GOVERNMENT</u>				
Not for Profit	48	8,663	2	166
For Profit	3	419	2	150
Other	4	135		
SUBTOTAL	55	9,217	4	316
<u>TOTAL</u>	90	13,020	7	1,860

COLORADO  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL			
	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	
ARMY				76			266			342
NAVY										
AIR FORCE				10			38			48
PHS (Comm. Corps)							25			25
VA FULL TIME				3	4		54	4		57
VA PART TIME	1			17			69	1		86
CIVILIAN (Active)	100	3		1,326	214	58	3,814	314	61	5,140
CIVILIAN (Inactive)										339
CIVILIAN (Unknown)										296
TOTAL	101	3		1,432	218	58	4,266	319	61	6,333

NURSES RN	<u>15,492</u>	PODIATRISTS	<u>63</u>
NURSES LPN	<u>4,498</u>	OPTOMETRISTS	<u>206</u>
DENTISTS	<u>1,547</u>	PHARMACISTS	<u>1,625</u>
VETERINARIANS	<u>731</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 119

## CONNECTICUT HOSPITALS

Percent Occupancy 79.3

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy	1	60		
Veterans Administration	2	210		
Indian Health (PHS)				
Department of Justice	1	14		
Other	1	33		
SUBTOTAL	5	317		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	2	271	7	3,892
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	34	10,565	5	697
For Profit			1	105
Other	12	1,474		
SUBTOTAL	46	12,039	6	802
<b>TOTAL</b>	53	12,627	13	4,694

## CONNECTICUT

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
<b>ARMY</b>												
NAVY				10				54				64
<b>AIR FORCE</b>												
PHS (Comm. Corps)				1				4				5
VA FULL TIME				4				59				63
VA PART TIME				14				91				105
CIVILIAN (Active)	12			1,792	37	51	5,296	49	51			7,088
CIVILIAN (Inactive)												494
CIVILIAN (Unknown)												412
<b>TOTAL</b>	<b>12</b>			<b>1,821</b>	<b>37</b>	<b>51</b>	<b>5,504</b>	<b>49</b>	<b>51</b>			<b>8,231</b>

NURSES RN	<u>20,789</u>	PODIATRISTS	<u>173</u>
NURSES LPN	<u>5,840</u>	OPTOMETRISTS	<u>265</u>
DENTISTS	<u>2,075</u>	PHARMACISTS	<u>1,862</u>
VETERINARIANS	<u>316</u>	MEDICAL SCHOOLS	<u>2</u>

M.D. GRADUATES PER YEAR 169

## DELAWARE HOSPITALS

Percent Occupancy 83.9

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	35		
Army				
Navy				
Veterans Administration	1	396		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	2	431		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>			1	583
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	8	2,103		
For Profit				
Other	3	1,053	1	55
SUBTOTAL	11	3,156	1	55
<b>TOTAL</b>	<b>13</b>	<b>3,587</b>	<b>1</b>	<b>638</b>

## DELAWARE

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS
ARMY									
NAVY									
AIR FORCE				4			13		
PHS (Comm. Corps)							1		
VA FULL TIME				7			31		
VA PART TIME				2			2		
CIVILIAN (Active)	2			260	21	2	606	23	2
CIVILIAN (Inactive)									57
CIVILIAN (Unknown)									57
TOTAL	2			273	21	2	653	23	2
									1,040

NURSES RN	<u>3,553</u>	PODIATRISTS	<u>18</u>
NURSES LPN	<u>838</u>	OPTOMETRISTS	<u>39</u>
DENTISTS	<u>234</u>	PHARMACISTS	<u>221</u>
VETERINARIANS	<u>66</u>	MEDICAL SCHOOLS	<u>0</u>

M.D. GRADUATES PER YEAR 0

## DISTRICT OF COLUMBIA

Percent Occupancy 85.1

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army	1	962		
Navy				
Veterans Administration	1	708		
Indian Health (PHS)				
Department of Justice				
Other			1	1,887
SUBTOTAL	2	1,670	1	1,887
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
STATE OR LOCAL GOVERNMENT	1	546		
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	11	4,119		
For Profit			1	200
Other	1	80		
SUBTOTAL	12	4,199	1	200
TOTAL	15	6,415	2	2,087

DISTRICT OF COLUMBIA  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES		TOTAL	IN RESERVES		TOTAL	IN RESERVES		TOTAL
	DOD	PHS		DOD	PHS		DOD	PHS	
ARMY			98			548			646
NAVY			40			380			420
AIR FORCE			23			126			149
PHS (Comm. Corps)			3			70			73
VA FULL TIME	1		23	7		145	8		168
VA PART TIME			11			24			35
CIVILIAN (Active)	26	1	806	44	50	2,305	70	51	3,111
CIVILIAN (Inactive)									209
CIVILIAN (Unknown)									254
<b>TOTAL</b>	<b>27</b>	<b>1</b>	<b>1,004</b>	<b>51</b>	<b>50</b>	<b>3,598</b>	<b>78</b>	<b>51</b>	<b>5,065</b>

NURSES RN	<u>6,136</u>	PODIATRISTS	<u>51</u>
NURSES LPN	<u>2,352</u>	OPTOMETRISTS	<u>68</u>
DENTISTS	<u>490</u>	PHARMACISTS	<u>532</u>
VETERINARIANS	<u>45</u>	MEDICAL SCHOOLS	<u>3</u>

M.D. GRADUATES PER YEAR 465

FLORIDA HOSPITALS

Percent Occupancy 72.9

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	5	398		
Army				
Navy	3	376		
Veterans Administration	5	3,434		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	13	4,208		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	60	10,906	5	7,168
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	84	21,944	5	334
For Profit	69	12,040	10	779
Other	6	482		
SUBTOTAL	159	34,466	15	1,113
<b>TOTAL</b>	232	49,580	20	8,281

## FLORIDA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES		TOTAL	IN RESERVES		TOTAL	IN RESERVES		TOTAL
	DOD	PHS		DOD	PHS		DOD	PHS	
ARMY			1						1
NAVY			50			247			297
AIR FORCE			38			142			180
PHS (Comm. Corps)			2			30			32
VA FULL TIME	2		27	7		239	9		266
VA PART TIME	4		64	5		192	9		256
CIVILIAN (Active)	68	58	4,674	148	82	10,877	216	87	15,551
CIVILIAN (Inactive)									2,846
CIVILIAN (Unknown)									885
<b>TOTAL</b>	<b>74</b>	<b>58</b>	<b>4,856</b>	<b>160</b>	<b>82</b>	<b>11,727</b>	<b>234</b>	<b>87</b>	<b>20,314</b>

NURSES RN	<u>41,120</u>	PODIATRISTS	<u>245</u>
NURSES LPN	<u>12,788</u>	OPTOMETRISTS	<u>619</u>
DENTISTS	<u>3,914</u>	PHARMACISTS	<u>3,482</u>
VETERINARIANS	<u>1,151</u>	MEDICAL SCHOOLS	<u>3</u>

M.D. GRADUATES PER YEAR 344

## GEORGIA HOSPITALS

Percent Occupancy 71.7

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	2	55		
Army	3	795		
Navy				
Veterans Administration	3	1,867		
Indian Health (PHS)				
Department of Justice	1	50		
Other				
SUBTOTAL	9	2,767		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	111	15,037	6	4,067
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	25	5,097	2	146
For Profit	23	2,375	6	472
Other	4	200		
SUBTOTAL	52	7,672	8	618
<b>TOTAL</b>	172	25,476	14	4,685

GEORGIA  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL			
	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	
ARMY				54			263			317
NAVY							4			4
AIR FORCE				6			25			31
PHS (Comm. Corps)				7			175			182
VA FULL TIME	2			10	5		126	7		136
VA PART TIME	2			24	2		62	4		86
CIVILIAN (Active)	35	4		2,238	108	49	4,657	143	53	6,895
CIVILIAN (Inactive)										338
CIVILIAN (Unknown)										392
TOTAL	39	4		2,339	115	49	5,312	154	53	8,381

NURSES RN	<u>18,153</u>	PODIATRISTS	<u>70</u>
NURSES LPN	<u>10,818</u>	OPTOMETRISTS	<u>282</u>
DENTISTS	<u>1,927</u>	PHARMACISTS	<u>2,398</u>
VETERINARIANS	<u>702</u>	MEDICAL SCHOOLS	<u>2</u>

M.D. GRADUATES PER YEAR 286

HAWAII HOSPITALS

Percent Occupancy 77.3

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army	1	572		
Navy				
Veterans Administration				
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	1	572		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	8	611	1	199
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	11	1,874		
For Profit	1	152		
Other	5	506		
SUBTOTAL	17	2,532		
<b>TOTAL</b>	<b>26</b>	<b>3,715</b>	<b>1</b>	<b>199</b>

## HAWAII

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY		64			248			312	
NAVY		3			31			34	
AIR FORCE		3			14			17	
PHS (Comm. Corps)					6			6	
VA FULL TIME					6			6	
VA PART TIME					4			4	
CIVILIAN (Active)	6	462		19 1	1,193		25 1	1,655	
CIVILIAN (Inactive)								136	
CIVILIAN (Unknown)								86	
<b>TOTAL</b>	<b>6</b>	<b>532</b>		<b>19 1</b>	<b>1,502</b>		<b>25 1</b>	<b>2,256</b>	

NURSES RN	<u>3,979</u>	PODIATRISTS	<u>8</u>
NURSES LPN	<u>1,703</u>	OPTOMETRISTS	<u>73</u>
DENTISTS	<u>533</u>	PHARMACISTS	<u>200</u>
VETERINARIANS	<u>75</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 62

## IDAHO HOSPITALS

Percent Occupancy 66.4

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<u>FEDERAL GOVERNMENT</u>				
Air Force	1	20		
Army				
Navy				
Veterans Administration	1	149		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	2	169		
<u>FORMER FEDERAL (PHS)</u>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	31	1,535	1	32
<u>NON GOVERNMENT</u>				
Not for Profit	13	1,558		
For Profit	2	187	1	22
Other	1	34		
SUBTOTAL	16	1,779	1	22
<u>TOTAL</u>	40	3,483	2	54

## IDAHO

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
<b>ARMY</b>												
NAVY								3				3
AIR FORCE				3				17				20
PHS (Comm. Corps)								4				4
VA FULL TIME	1			4	3			15	4			19
VA PART TIME				1				6				7
CIVILIAN (Active)	6			286	6	13		643	12	13		929
CIVILIAN (Inactive)												82
CIVILIAN (Unknown)												46
<b>TOTAL</b>	<b>7</b>			<b>294</b>	<b>9</b>	<b>13</b>		<b>688</b>	<b>16</b>	<b>13</b>		<b>1,110</b>

NURSES RN	<u>3,516</u>	PODIATRISTS	<u>14</u>
NURSES LPN	<u>1,995</u>	OPTOMETRISTS	<u>84</u>
DENTISTS	<u>436</u>	PHARMACISTS	<u>418</u>
VETERINARIANS	<u>211</u>	MEDICAL SCHOOLS	<u>0</u>

M.D. GRADUATES PER YEAR 0

ILLINOIS HOSPITALS

Percent Occupancy 76.4

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<u>FEDERAL GOVERNMENT</u>				
Air Force	2	235		
Army				
Navy	1	158		
Veterans Administration	6	4,732		
Indian Health (PHS)				
Department of Justice	1	25		
Other				
SUBTOTAL	10	5,150		
<u>FORMER FEDERAL (PHS)</u>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	43	6,050	17	8,192
<u>NON GOVERNMENT</u>				
Not for Profit	191	49,523	1	99
For Profit	7	444	4	556
Other	10	2,246		
SUBTOTAL	208	52,213	5	655
<u>TOTAL</u>	261	63,413	22	8,846

ILLINOIS  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY		2			7			9	
NAVY		10			38			48	
AIR FORCE		21			99			120	
PHS (Comm. Corps)					11			11	
VA FULL TIME	1	20	2	293	3		313		
VA PART TIME	2	77	2	194	4		271		
CIVILIAN (Active)	48	4	4,979	131	73	14,021	179	77	19,000
CIVILIAN (Inactive)									1,109
CIVILIAN (Unknown)									1,353
<b>TOTAL</b>	<b>51</b>	<b>4</b>	<b>5,109</b>	<b>135</b>	<b>73</b>	<b>14,663</b>	<b>186</b>	<b>77</b>	<b>22,234</b>

NURSES RN	<u>58,043</u>	PODIATRISTS	<u>565</u>
NURSES LPN	<u>15,363</u>	OPTOMETRISTS	<u>1,556</u>
DENTISTS	<u>5,534</u>	PHARMACISTS	<u>5,701</u>
VETERINARIANS	<u>1,372</u>	MEDICAL SCHOOLS	<u>7</u>

M.D. GRADUATES PER YEAR 1,011

## INDIANA HOSPITALS

Percent Occupancy 78.4

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy				
Veterans Administration	2	761	1	881
Indian Health (PHS)				
Department of Justice	1	25		
Other				
SUBTOTAL	3	786	1	881
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	54	7,157	8	5,436
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	59	16,366	3	153
For Profit	1	237		
Other	4	856		
SUBTOTAL	64	17,459	3	153
<b>TOTAL</b>	<b>121</b>	<b>25,402</b>	<b>12</b>	<b>6,470</b>

## INDIANA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY							5		5
NAVY									
AIR FORCE							8		8
PHS (Comm. Corps)							2		2
VA FULL TIME	6	1		74	1		74	1	80
VA PART TIME		14			36				50
CIVILIAN (Active)	12	1	1,647	56	22	4,815	68	23	6,462
CIVILIAN (Inactive)									415
CIVILIAN (Unknown)									311
<b>TOTAL</b>	<b>12</b>	<b>1</b>	<b>1,667</b>	<b>57</b>	<b>22</b>	<b>4,940</b>	<b>69</b>	<b>23</b>	<b>7,333</b>

NURSES RN	<u>22,909</u>	PODIATRISTS	<u>126</u>
NURSES LPN	<u>6,463</u>	OPTOMETRISTS	<u>528</u>
DENTISTS	<u>2,123</u>	PHARMACISTS	<u>2,990</u>
VETERINARIANS	<u>859</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 309

IOWA HOSPITALS

Percent Occupancy 68.4

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy				
Veterans Administration	2	575	1	639
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	2	575	1	639
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	69	5,586	7	2,776
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	61	11,095		
For Profit	1	50		
Other				
SUBTOTAL	13	11,145		
<b>TOTAL</b>	133	17,306	8	3,415

## IOWA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
<b>ARMY</b>												
NAVY												
AIR FORCE												
PHS (Comm. Corps)								9				9
VA FULL TIME	1			9	1			72	2			81
VA PART TIME	1			11	1			41	2			52
CIVILIAN (Active)	11	3		932	41	20		2,489	52	23		3,421
CIVILIAN (Inactive)												217
CIVILIAN (Unknown)												114
<b>TOTAL</b>	<b>13</b>	<b>3</b>		<b>952</b>	<b>43</b>	<b>20</b>		<b>2,611</b>	<b>56</b>	<b>23</b>		<b>3,894</b>

NURSES RN	<u>15,499</u>	PODIATRISTS	<u>80</u>
NURSES LPN	<u>5,597</u>	OPTOMETRISTS	<u>307</u>
DENTISTS	<u>1,321</u>	PHARMACISTS	<u>1,494</u>
VETERINARIANS	<u>1,114</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 173

KANSAS HOSPITALS

Percent Occupancy 71.2

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	20		
Army	2	156		
Navy				
Veterans Administration	3	1,592		
Indian Health (PHS)				
Department of Justice	1	13		
Other				
SUBTOTAL	7	1,781		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	62	3,639	6	2,471
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	76	9,359	3	240
For Profit	6	625		
Other	3	74		
SUBTOTAL	85	10,058	9	240
<b>TOTAL</b>	154	15,478	9	2,711

## KANSAS

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY		19			49			68	
NAVY									
AIR FORCE		1			10			11	
PHS (Comm. Corps)					5			5	
VA FULL TIME	1	6	3		90	4		96	
VA PART TIME		2			14			16	
CIVILIAN (Active)	12	1	869	35	13	2,467	47	14	3,336
CIVILIAN (Inactive)									240
CIVILIAN (Unknown)									184
<b>TOTAL</b>	<b>13</b>	<b>1</b>	<b>897</b>	<b>38</b>	<b>13</b>	<b>2,635</b>	<b>51</b>	<b>14</b>	<b>3,956</b>

NURSES RN	<u>11,848</u>	PODIATRISTS	<u>39</u>
NURSES LPN	<u>3,185</u>	OPTOMETRISTS	<u>237</u>
DENTISTS	<u>962</u>	PHARMACISTS	<u>1,172</u>
VETERINARIANS	<u>613</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 209

KENTUCKY HOSPITALS

Percent Occupancy 76.9

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army	2	491		
Navy				
Veterans Administration	2	1,295		
Indian Health (PHS)				
Department of Justice	1	10		
Other				
SUBTOTAL	5	1,796		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	27	2,774	3	911
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	71	10,495	2	471
For Profit	10	1,719		
Other	2	157		
SUBTOTAL	83	12,371	2	471
<b>TOTAL</b>	115	16,941	5	1,382

## KENTUCKY

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY				31				74				105
NAVY												
AIR FORCE												
PHS (Comm. Corps)								13				13
VA FULL TIME	1			5				63	1			68
VA PART TIME	1			21				51	1			72
CIVILIAN (Active)	27	4		1,295	56	33		3,117	83	37		4,412
CIVILIAN (Inactive)												242
CIVILIAN (Unknown)												275
<b>TOTAL</b>	<b>29</b>	<b>4</b>		<b>1,352</b>	<b>56</b>	<b>33</b>		<b>3,318</b>	<b>85</b>	<b>37</b>		<b>5,187</b>

NURSES RN	<u>11,677</u>	PODIATRISTS	<u>50</u>
NURSES LPN	<u>5,229</u>	OPTOMETRISTS	<u>218</u>
DENTISTS	<u>1,339</u>	PHARMACISTS	<u>1,556</u>
VETERINARIANS	<u>430</u>	MEDICAL SCHOOLS	<u>2</u>

M.D. GRADUATES PER YEAR 245

## LOUISIANA HOSPITALS

Percent Occupancy 70.0

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<u>FEDERAL GOVERNMENT</u>				
Air Force	2	75		
Army	1	162		
Navy				
Veterans Administration	3	1,262		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	6	1,499		
<u>FORMER FEDERAL (PHS)</u>				
(Now State or Local Government)	1	300	1	357
<u>STATE OR LOCAL GOVERNMENT</u>	68	7,503	4	3,811
<u>NON GOVERNMENT</u>				
Not for Profit	35	8,183		
For Profit	37	2,998	3	500
Other	4	964		
SUBTOTAL	76	12,145	3	500
TOTAL	151	21,147	8	5,168

LOUISIANA  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL			
	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	
ARMY				10			35			45
NAVY							9			9
AIR FORCE				6			32			38
PHS (Comm. Corps)				1			23			24
VA FULL TIME				12	6		84	6		96
VA PART TIME				11	4		74	4		85
CIVILIAN (Active)	29	2		1,875	70	39	3,690	99	41	5,565
CIVILIAN (Inactive)										410
CIVILIAN (Unknown)										392
<b>TOTAL</b>	<b>29</b>	<b>2</b>		<b>1,915</b>	<b>80</b>	<b>39</b>	<b>3,947</b>	<b>109</b>	<b>41</b>	<b>6,664</b>

NURSES RN	<u>11,459</u>	PODIATRISTS	<u>35</u>
NURSES LPN	<u>7,565</u>	OPTOMETRISTS	<u>220</u>
DENTISTS	<u>1,424</u>	PHARMACISTS	<u>1,753</u>
VETERINARIANS	<u>415</u>	MEDICAL SCHOOLS	<u>3</u>

M.D. GRADUATES PER YEAR 329

MAINE HOSPITALS

Percent Occupancy 75.4

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy				
Veterans Administration	1	625		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	1	625		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	3	166	3	1,117
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	45	4,904		
For Profit				
Other				
SUBTOTAL	45	4,904		
<b>TOTAL</b>	<b>49</b>	<b>5,695</b>	<b>3</b>	<b>1,117</b>

## MAINE

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
<b>ARMY</b>									
NAVY					6			6	
AIR FORCE		3			11			14	
PHS (Comm. Corps)					5			5	
VA FULL TIME	1	7			39	1		46	
VA PART TIME		5			4			9	
CIVILIAN (Active)	3	3	400	19	18	1,109	22	21	1,509
CIVILIAN (Inactive)									189
CIVILIAN (Unknown)									83
<b>TOTAL</b>	<b>4</b>	<b>3</b>	<b>415</b>	<b>19</b>	<b>18</b>	<b>1,174</b>	<b>23</b>	<b>21</b>	<b>1,861</b>

NURSES RN	<u>6,263</u>	PODIATRISTS	<u>18</u>
NURSES LPN	<u>1,882</u>	OPTOMETRISTS	<u>121</u>
DENTISTS	<u>456</u>	PHARMACISTS	<u>391</u>
VETERINARIANS	<u>133</u>	MEDICAL SCHOOLS	<u>0</u>

M.D. GRADUATES PER YEAR 0

## MARYLAND HOSPITALS

Percent Occupancy 81.8

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	270		
Army	1	80		
Navy	2	497		
Veterans Administration	2	352	1	866
Indian Health (PHS)				
Department of Justice				
Other			1	501
SUBTOTAL	6	1,119	2	1,367
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)	1	135		
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	5	2,082	7	4,936
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	44	11,327	3	333
For Profit	4	813	2	328
Other	9	2,057		
SUBTOTAL	57	14,197	5	661
<b>TOTAL</b>	<b>69</b>	<b>17,613</b>	<b>14</b>	<b>6,964</b>

## MARYLAND

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY		6			53			59	
NAVY		5			25			30	
<b>AIR FORCE</b>									
PHS (Comm. Corps)		48			623			671	
VA FULL TIME		6	1		78	1		84	
VA PART TIME		6	1		30	1		36	
CIVILIAN (Active)	43	9	2,610	84	219	7,098	127	228	9,708
CIVILIAN (Inactive)									596
CIVILIAN (Unknown)									846
<b>TOTAL</b>	<b>43</b>	<b>9</b>	<b>2,681</b>	<b>86</b>	<b>219</b>	<b>7,907</b>	<b>129</b>	<b>228</b>	<b>12,030</b>

NURSES RN	<u>19,672</u>	PODIATRISTS	<u>132</u>
NURSES LPN	<u>5,235</u>	OPTOMETRISTS	<u>210</u>
DENTISTS	<u>2,112</u>	PHARMACISTS	<u>1,922</u>
VETERINARIANS	<u>664</u>	MEDICAL SCHOOLS	<u>3</u>

M.D. GRADUATES PER YEAR 294

## MASSACHUSETTS HOSPITALS

Percent Occupancy 81.3

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army	1	613		
Navy				
Veterans Administration	2	279	3	1,529
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	3	892	3	1,529
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)	1	110		
<b><u>STATE OR LOCAL GOVERNMENT</u></b>				
	13	2,420	12	5,156
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	100	22,800	3	433
For Profit	3	353	6	442
Other	38	7,484		
SUBTOTAL	141	30,637	9	875
<b>TOTAL</b>	<b>158</b>	<b>34,059</b>	<b>24</b>	<b>7,560</b>

## MASSACHUSETTS

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY				5				22				27
NAVY								2				2
AIR FORCE								6				6
PHS (Comm. Corps)				1				25				26
VA FULL TIME				20	9			228	9			248
VA PART TIME	1			38				175				213
CIVILIAN (Active)	39	9		3,475	86	176		10,424	125	185		13,899
CIVILIAN (Inactive)												896
CIVILIAN (Unknown)												951
<b>TOTAL</b>	<b>40</b>	<b>9</b>		<b>3,539</b>	<b>95</b>	<b>176</b>		<b>10,882</b>	<b>135</b>	<b>185</b>		<b>16,268</b>

NURSES RN	<u>45,165</u>	PODIATRISTS	<u>344</u>
NURSES LPN	<u>13,418</u>	OPTOMETRISTS	<u>749</u>
DENTISTS	<u>3,686</u>	PHARMACISTS	<u>3,207</u>
VETERINARIANS	<u>483</u>	MEDICAL SCHOOLS	<u>4</u>

M.D. GRADUATES PER YEAR 535

## MICHIGAN HOSPITALS

Percent Occupancy 78.4

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	2	45		
Army				
Navy				
Veterans Administration	4	1,317	1	1,113
Indian Health (PHS)				
Department of Justice	1	8		
Other				
SUBTOTAL	7	1,370	1	1,113
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	49	7,257	9	5,302
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	156	32,796	2	320
For Profit			5	294
Other	6	1,357		
SUBTOTAL	162	34,153	7	614
<b>TOTAL</b>	218	42,780	17	7,029

## MICHIGAN

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY								2				2
NAVY								1				1
AIR FORCE				6				23				29
PHS (Comm. Corps)				1				11				12
VA FULL TIME	2			11	3			159	5			170
VA PART TIME				25	1			77	1			102
CIVILIAN (Active)	40	5		3,884	83	50		9,471	123	55		13,355
CIVILIAN (Inactive)												752
CIVILIAN (Unknown)												846
<b>TOTAL</b>	<b>42</b>	<b>5</b>		<b>3,927</b>	<b>87</b>	<b>50</b>		<b>9,744</b>	<b>129</b>	<b>55</b>		<b>15,269</b>

NURSES RN	<u>41,533</u>	PODIATRISTS	<u>294</u>
NURSES LPN	<u>17,803</u>	OPTOMETRISTS	<u>739</u>
DENTISTS	<u>4,563</u>	PHARMACISTS	<u>4,400</u>
VETERINARIANS	<u>1,179</u>	MEDICAL SCHOOLS	<u>3</u>

M.D. GRADUATES PER YEAR 612

## MINNESOTA HOSPITALS

Percent Occupancy 72.7

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy				
Veterans Administration	1	738	1	889
Indian Health (PHS)	2	53		
Department of Justice				
Other				
SUBTOTAL	3	791	1	889
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	83	7,000	7	4,342
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	85	16,744	1	45
For Profit				
Other	2	676		
SUBTOTAL	87	17,420	1	45
<b>TOTAL</b>	<b>173</b>	<b>25,211</b>	<b>9</b>	<b>5,276</b>

## MINNESOTA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY												
NAVY												
AIR FORCE								1				1
PHS (Comm. Corps)				1				15				16
VA FULL TIME				9		5		123		5		132
VA PART TIME				18		1		38		1		56
CIVILIAN (Active)	51	2		1,739	156	40		5,415	207	42		7,154
CIVILIAN (Inactive)												488
CIVILIAN (Unknown)												324
<b>TOTAL</b>	<b>51</b>	<b>2</b>		<b>1,767</b>	<b>162</b>	<b>40</b>		<b>5,592</b>	<b>213</b>	<b>42</b>		<b>8,171</b>

NURSES RN	<u>26,159</u>	PODIATRISTS	<u>69</u>
NURSES LPN	<u>9,534</u>	OPTOMETRISTS	<u>350</u>
DENTISTS	<u>2,313</u>	PHARMACISTS	<u>1,968</u>
VETERINARIANS	<u>847</u>	MEDICAL SCHOOLS	<u>3</u>

M.D. GRADUATES PER YEAR 326

## MISSISSIPPI HOSPITALS

Percent Occupancy 75.4

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<u>FEDERAL GOVERNMENT</u>				
Air Force	1	356		
Army				
Navy				
Veterans Administration	2	1,884		
Indian Health (PHS)	1	40		
Department of Justice				
Other				
SUBTOTAL	4	2,280		
<u>FORMER FEDERAL (PHS)</u>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	77	7,555	2	2,598
<u>NON GOVERNMENT</u>				
Not for Profit	21	3,533		
For Profit	8	774	1	56
Other	2	85		
SUBTOTAL	31	4,392	1	56
<u>TOTAL</u>	112	14,227	3	2,654

MISSISSIPPI  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES		TOTAL	IN RESERVES		TOTAL	IN RESERVES		TOTAL
	DOD	PHS		DOD	PHS		DOD	PHS	
<b>ARMY</b>									
<b>NAVY</b>									
AIR FORCE			68			139			207
PHS (Comm. Corps)			1			24			25
VA FULL TIME	2		10	4		79	6		89
VA PART TIME	2		10			17	2		27
CIVILIAN (Active)	13	1	770	43	13	1,643	56	14	2,413
CIVILIAN (Inactive)									130
CIVILIAN (Unknown)									150
<b>TOTAL</b>	<b>17</b>	<b>1</b>	<b>859</b>	<b>47</b>	<b>13</b>	<b>1,902</b>	<b>64</b>	<b>14</b>	<b>3,041</b>

NURSES RN	<u>6,512</u>	PODIATRISTS	<u>8</u>
NURSES LPN	<u>4,722</u>	OPTOMETRISTS	<u>118</u>
DENTISTS	<u>695</u>	PHARMACISTS	<u>1,016</u>
VETERINARIANS	<u>256</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 145

## MISSOURI HOSPITALS

Percent Occupancy 74.6

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<u>FEDERAL GOVERNMENT</u>				
Air Force	1	15		
Army	1	235		
Navy				
Veterans Administration	4	2,105		
Indian Health (PHS)				
Department of Justice	1	540		
Other				
SUBTOTAL	7	2,895		
<u>FORMER FEDERAL (PHS)</u>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	50	5,272	9	4,135
<u>NON GOVERNMENT</u>				
Not for Profit	84	20,833		
For Profit	11	865		
Other	4	941		
SUBTOTAL	99	22,639		
TOTAL	156	30,806	9	4,135

## MISSOURI

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY		16			30			46	
NAVY					1			1	
AIR FORCE		1			11			12	
PHS (Comm. Corps)					15			15	
VA FULL TIME		10	2		126	2		136	
VA PART TIME	2	37	1		125	3		162	
CIVILIAN (Active)	67	2	2,121	138	43	5,012	205	45	7,133
CIVILIAN (Inactive)								461	
CIVILIAN (Unknown)								511	
TOTAL	69	2	2,185	141	43	5,320	210	45	8,477

NURSES RN	<u>21,542</u>	PODIATRISTS	<u>81</u>
NURSES LPN	<u>9,420</u>	OPTOMETRISTS	<u>410</u>
DENTISTS	<u>2,127</u>	PHARMACISTS	<u>2,350</u>
VETERINARIANS	<u>839</u>	MEDICAL SCHOOLS	<u>4</u>

M.D. GRADUATES PER YEAR 461

MONTANA HOSPITALS

Percent Occupancy 64.1

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	15		
Army				
Navy				
Veterans Administration	2	280		
Indian Health (PHS)	3	86		
Department of Justice				
Other				
SUBTOTAL	6	381		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	10	528	1	380
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	48	3,912		
For Profit	2	53		
Other				
SUBTOTAL	50	3,965		
<b>TOTAL</b>	<b>66</b>	<b>4,874</b>	<b>1</b>	<b>380</b>

## MONTANA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
<b>ARMY</b>												
NAVY												
AIR FORCE				1				12				13
PHS (Comm. Corps)				2				35				37
VA FULL TIME				6				16				22
VA PART TIME					1			2	1			2
CIVILIAN (Active)	13	2		228	15	17		668	28	19		956
CIVILIAN (Inactive)												62
CIVILIAN (Unknown)												39
<b>TOTAL</b>	<b>13</b>	<b>2</b>		<b>297</b>	<b>16</b>	<b>17</b>		<b>733</b>	<b>29</b>	<b>19</b>		<b>1,131</b>

NURSES RN	<u>3,957</u>	PODIATRISTS	<u>13</u>
NURSES LPN	<u>1,415</u>	OPTOMETRISTS	<u>97</u>
DENTISTS	<u>407</u>	PHARMACISTS	<u>418</u>
VETERINARIANS	<u>233</u>	MEDICAL SCHOOLS	<u>0</u>

M.D. GRADUATES PER YEAR 0

## NEBRASKA HOSPITALS

Percent Occupancy 67.6

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	65		
Army				
Navy				
Veterans Administration	3	771		
Indian Health (PHS)	1	41		
Department of Justice				
Other				
SUBTOTAL	5	877		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	40	2,304	3	565
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	56	7,280		
For Profit	1	23		
Other	4	851		
SUBTOTAL	61	8,154		
<b>TOTAL</b>	<b>106</b>	<b>11,335</b>	<b>3</b>	<b>565</b>

## NEBRASKA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY												
NAVY												
AIR FORCE												
PHS (Comm. Corps)				1				3				4
VA FULL TIME				6	3			37	3			43
VA PART TIME	3			19	2			40	5			59
CIVILIAN (Active)	5	1		565	26	13	1,618	31	14			2,183
CIVILIAN (Inactive)												133
CIVILIAN (Unknown)												81
<b>TOTAL</b>	<b>8</b>	<b>1</b>		<b>591</b>	<b>31</b>	<b>13</b>	<b>1,698</b>	<b>39</b>	<b>14</b>			<b>2,503</b>

NURSES RN	<u>8,874</u>	PODIATRISTS	<u>36</u>
NURSES LPN	<u>2,847</u>	OPTOMETRISTS	<u>147</u>
DENTISTS	<u>860</u>	PHARMACISTS	<u>933</u>
VETERINARIANS	<u>448</u>	MEDICAL SCHOOLS	<u>2</u>

M.D. GRADUATES PER YEAR 229

## NEVADA HOSPITALS

Percent Occupancy 68.2

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	40		
Army				
Navy				
Veterans Administration	1	200		
Indian Health (PHS)	2	29		
Department of Justice				
Other				
SUBTOTAL	4	269		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	11	1,236	1	102
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	3	416		
For Profit	5	1,197		
Other				
SUBTOTAL	8	1,613		
<b>TOTAL</b>	<b>23</b>	<b>3,118</b>	<b>1</b>	<b>102</b>

## NEVADA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS
ARMY							1		1
NAVY							1		1
AIR FORCE				3			22		25
PHS (Comm. Corps)							7		7
VA FULL TIME				3			27		30
VA PART TIME				2			9		11
CIVILIAN (Active)	6			274	17	3	639	23	3
CIVILIAN (Inactive)									72
CIVILIAN (Unknown)									43
TOTAL	6			282	17	3	706	23	3
									1,103

NURSES RN	<u>2,709</u>	PODIATRISTS	<u>15</u>
NURSES LPN	<u>990</u>	OPTOMETRISTS	<u>48</u>
DENTISTS	<u>305</u>	PHARMACISTS	<u>276</u>
VETERINARIANS	<u>114</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 0

NEW HAMPSHIRE HOSPITALS

Percent Occupancy 74.1

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	40		
Army				
Navy				
Veterans Administration	1	260		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	2	300		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>				
			1	773
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	27	3,452		
For Profit				
Other	2	47		
SUBTOTAL	29	3,499		
TOTAL	31	3,799	1	773

NEW HAMPSHIRE  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
<b>ARMY</b>												
NAVY								5				5
AIR FORCE				7				17				24
PHS (Comm. Corps)				1				3				4
VA FULL TIME				5				19				24
VA PART TIME				1				4				5
CIVILIAN (Active)	1	1		375	10	14		978	11	15		1,353
CIVILIAN (Inactive)												154
CIVILIAN (Unknown)												48
<b>TOTAL</b>	<b>1</b>	<b>1</b>		<b>389</b>	<b>10</b>	<b>14</b>		<b>1,026</b>	<b>11</b>	<b>15</b>		<b>1,617</b>

NURSES RN	<u>6,628</u>	PODIATRISTS	<u>21</u>
NURSES LPN	<u>1,532</u>	OPTOMETRISTS	<u>71</u>
DENTISTS	<u>443</u>	PHARMACISTS	<u>366</u>
VETERINARIANS	<u>128</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 68

## NEW JERSEY HOSPITALS

Percent Occupancy 82.3

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army	2	212		
Navy				
Veterans Administration	1	937	1	1,315
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	3	1,149	1	1,315
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	5	2,417	7	6,611
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	90	26,542	4	658
For Profit	6	1,191	1	122
Other	18	2,453		
SUBTOTAL	114	30,186	5	780
<b>TOTAL</b>	122	33,572	13	9,364

NEW JERSEY  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY				9				50				59
NAVY								4				4
AIR FORCE								10				10
PHS (Comm. Corps)				3				17				20
VA FULL TIME					10			139				149
VA PART TIME		4			24			54		4		78
CIVILIAN (Active)	14	8		3,539	94	77		8,969	108	85		12,508
CIVILIAN (Inactive)												951
CIVILIAN (Unknown)												917
<b>TOTAL</b>	<b>18</b>	<b>8</b>		<b>3,585</b>	<b>94</b>	<b>77</b>		<b>9,243</b>	<b>112</b>	<b>85</b>		<b>14,696</b>

NURSES RN	<u>35,284</u>	PODIATRISTS	<u>352</u>
NURSES LPN	<u>14,605</u>	OPTOMETRISTS	<u>670</u>
DENTISTS	<u>4,418</u>	PHARMACISTS	<u>4,112</u>
VETERINARIANS	<u>668</u>	MEDICAL SCHOOLS	<u>2</u>

M.D. GRADUATES PER YEAR 182

## NEW MEXICO HOSPITALS

Percent Occupancy 70.8

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	3	100		
Army				
Navy				
Veterans Administration	1	393		
Indian Health (PHS)	7	385		
Department of Justice				
Other				
SUBTOTAL	11	878		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	7	735	3	993
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	27	2,844	1	92
For Profit	3	281		
Other	2	268		
SUBTOTAL	32	3,393	4	1,085
<b>TOTAL</b>	50	5,006	7	2,078

## NEW MEXICO

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY		1			3			4	
NAVY		6			4			10	
AIR FORCE		15			46			61	
PHS (Comm. Corps)		13			106			119	
VA FULL TIME	1	3	1	1	38	2		41	
VA PART TIME		8			27			35	
CIVILIAN (Active)	5	4	482	22	53	1,222	27	57	1,704
CIVILIAN (Inactive)									172
CIVILIAN (Unknown)									92
<b>TOTAL</b>	<b>6</b>	<b>4</b>	<b>528</b>	<b>23</b>	<b>53</b>	<b>1,446</b>	<b>29</b>	<b>57</b>	<b>2,238</b>

NURSES RN	<u>4,468</u>	PODIATRISTS	<u>26</u>
NURSES LPN	<u>1,797</u>	OPTOMETRISTS	<u>80</u>
DENTISTS	<u>436</u>	PHARMACISTS	<u>586</u>
VETERINARIANS	<u>198</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 75

## NEW YORK HOSPITALS

Percent Occupancy 86.3

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	2	35		
Army	1	65		
Navy				
Veterans Administration	10	6,640	2	2,503
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	13	6,740	2	2,503
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)	1	407		
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	38	14,082	27	31,484
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	214	61,739		
For Profit	32	5,340	11	1,092
Other	13	4,946		
SUBTOTAL	259	72,025	11	1,092
<b>TOTAL</b>	311	93,254	40	35,079

## NEW YORK

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY		14			23			37	
NAVY					1			1	
AIR FORCE		3			29			32	
PHS (Comm. Corps)		4			64			68	
VA FULL TIME		55	9		622	9		677	
VA PART TIME	2	106	3		313	5		419	
CIVILIAN (Active)	71	14	11,038	206	232	31,398	277	246	42,436
CIVILIAN (Inactive)									2,749
CIVILIAN (Unknown)									3,528
<b>TOTAL</b>	<b>73</b>	<b>14</b>	<b>11,220</b>	<b>218</b>	<b>232</b>	<b>32,450</b>	<b>291</b>	<b>246</b>	<b>49,947</b>

NURSES RN	<u>101,443</u>	PODIATRISTS	<u>1,220</u>
NURSES LPN	<u>33,162</u>	OPTOMETRISTS	<u>1,581</u>
DENTISTS	<u>11,871</u>	PHARMACISTS	<u>8,801</u>
VETERINARIANS	<u>1,529</u>	MEDICAL SCHOOLS	<u>12</u>

M.D. GRADUATES PER YEAR 1,650

## NORTH CAROLINA HOSPITALS

Percent Occupancy 76.7

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	30		
Army	1	255		
Navy	2	178		
Veterans Administration	3	1,440	1	859
Indian Health (PHS)	1	26		
Department of Justice				
Other				
SUBTOTAL	8	1,929	1	859
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	40	7,382	5	5,250
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	82	14,776	1	125
For Profit	9	870	3	223
Other	7	875		
SUBTOTAL	98	16,521	4	348
<b>TOTAL</b>	146	25,832	10	6,457

NORTH CAROLINA  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY		26			94			120	
NAVY		22			108			130	
AIR FORCE		4			29			33	
PHS (Comm. Corps)		2			45			47	
VA FULL TIME	2	22		2	150	4		172	
VA PART TIME	1	15			23	1		38	
CIVILIAN (Active)	41	5	2,316	91	59	5,593	132	64	7,909
CIVILIAN (Inactive)									601
CIVILIAN (Unknown)									374
<b>TOTAL</b>	<b>44</b>	<b>5</b>	<b>2,407</b>	<b>93</b>	<b>59</b>	<b>6,042</b>	<b>137</b>	<b>64</b>	<b>9,424</b>

NURSES RN	<u>23,897</u>	PODIATRISTS	<u>53</u>
NURSES LPN	<u>8,927</u>	OPTOMETRISTS	<u>328</u>
DENTISTS	<u>1,925</u>	PHARMACISTS	<u>2,051</u>
VETERINARIANS	<u>534</u>	MEDICAL SCHOOLS	<u>4</u>

M.D. GRADUATES PER YEAR 325

## NORTH DAKOTA HOSPITALS

Percent Occupancy 67.5

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	2	70		
Army				
Navy				
Veterans Administration	1	260		
Indian Health (PHS)	2	78		
Department of Justice				
Other				
SUBTOTAL	5	408		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	2	126	1	784
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	50	4,519		
For Profit	1	26		
Other	1	36		
SUBTOTAL	52	4,581		
<b>TOTAL</b>	59	5,115	1	784

## NORTH DAKOTA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY												
NAVY												
AIR FORCE												
PHS (Comm. Corps)				1				6				7
VA FULL TIME				1				17				18
VA PART TIME				3				15				18
CIVILIAN (Active)	9			201	23	12		566	32	12		767
CIVILIAN (Inactive)												52
CIVILIAN (Unknown)												44
<b>TOTAL</b>	<b>9</b>			<b>206</b>	<b>23</b>	<b>12</b>		<b>604</b>	<b>32</b>	<b>12</b>		<b>906</b>

NURSES RN	<u>3,775</u>	PODIATRISTS	<u>5</u>
NURSES LPN	<u>1,392</u>	OPTOMETRISTS	<u>73</u>
DENTISTS	<u>265</u>	PHARMACISTS	<u>369</u>
VETERINARIANS	<u>115</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 39

OHIO HOSPITALS

Percent Occupancy 78.3

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	339		
Army				
Navy				
Veterans Administration	3	3,462	1	940
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	4	3,801	1	940
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	32	6,107	16	7,382
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	172	44,130	5	442
For Profit	1	39	2	122
Other	6	763		
SUBTOTAL	179	44,932	7	564
<b>TOTAL</b>	215	54,840	24	8,886

## OHIO

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
<b>ARMY</b>												
NAVY								1				1
AIR FORCE				121				237				358
PHS (Comm. Corps)				3				33				36
VA FULL TIME				8	6			257	6			265
VA PART TIME				29				88				117
CIVILIAN (Active)	37	4		4,554	116	62	11,290	153	66			15,844
CIVILIAN (Inactive)												1,073
CIVILIAN (Unknown)												956
<b>TOTAL</b>	<b>37</b>	<b>4</b>		<b>4,715</b>	<b>122</b>	<b>62</b>	<b>11,906</b>	<b>159</b>	<b>66</b>			<b>18,650</b>

NURSES RN	<u>52,969</u>	PODIATRISTS	<u>509</u>
NURSES LPN	<u>24,161</u>	OPTOMETRISTS	<u>972</u>
DENTISTS	<u>4,828</u>	PHARMACISTS	<u>5,047</u>
VETERINARIANS	<u>1,367</u>	MEDICAL SCHOOLS	<u>6</u>

M.D. GRADUATES PER YEAR 617

## OKLAHOMA HOSPITALS

Percent Occupancy 69.0

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	2	50		
Army	1	149		
Navy				
Veterans Administration	2	655		
Indian Health (PHS)	6	232		
Department of Justice	1	22		
Other				
SUBTOTAL	12	1,108		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	67	4,924	4	2,787
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	45	7,322	2	103
For Profit	8	466		
Other	3	305		
SUBTOTAL	56	8,093	2	103
<b>TOTAL</b>	135	14,125	6	2,890

## OKLAHOMA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY				11				42				53
NAVY								1				1
AIR FORCE				8				35				43
PHS (Comm. Corps)				20				64				84
VA FULL TIME				5	1			46	1			51
VA PART TIME				15	3			82	3			97
CIVILIAN (Active)	11	2		992	61	27		1,887	72	29		2,879
CIVILIAN (Inactive)												601
CIVILIAN (Unknown)												374
<b>TOTAL</b>	<b>11</b>	<b>2</b>		<b>1,051</b>	<b>65</b>	<b>27</b>		<b>2,157</b>	<b>76</b>	<b>29</b>		<b>4,183</b>

NURSES RN	<u>8,845</u>	PODIATRISTS	<u>49</u>
NURSES LPN	<u>5,481</u>	OPTOMETRISTS	<u>264</u>
DENTISTS	<u>1,058</u>	PHARMACISTS	<u>1,401</u>
VETERINARIANS	<u>553</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 154

## OREGON HOSPITALS

Percent Occupancy 70.4

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy				
Veterans Administration	2	1,197		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	2	1,197		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	23	1,587	3	1,706
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	45	6,701		
For Profit	9	540	1	64
Other	1	26		
SUBTOTAL	55	7,267	1	64
<u>TOTAL</u>	80	10,051	4	1,770

## OREGON

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY												
NAVY												
AIR FORCE												
PHS (Comm. Corps)								15				15
VA FULL TIME	2			12				115	2			127
VA PART TIME				6	1			27	1			33
CIVILIAN (Active)	5			1,260	47			2,951	52			4,211
CIVILIAN (Inactive)												364
CIVILIAN (Unknown)												261
<b>TOTAL</b>	<b>2</b>	<b>5</b>		<b>1,278</b>	<b>1</b>	<b>47</b>		<b>3,108</b>	<b>3</b>	<b>52</b>		<b>5,011</b>

NURSES RN	<u>12,793</u>	PODIATRISTS	<u>35</u>
NURSES LPN	<u>3,104</u>	OPTOMETRISTS	<u>304</u>
DENTISTS	<u>1,603</u>	PHARMACISTS	<u>1,206</u>
VETERINARIANS	<u>409</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 112

## PENNSYLVANIA HOSPITALS

Percent Occupancy 79.3

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy	1	136		
Veterans Administration	7	3,564	2	2,213
Indian Health (PHS)				
Department of Justice	1	17		
Other				
SUBTOTAL	9	3,717	2	2,213
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
STATE OR LOCAL GOVERNMENT	10	1,288	19	14,287
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	219	53,203	8	939
For Profit	16	1,600	4	342
Other	18	5,331		
SUBTOTAL	253	60,134	12	1,594
TOTAL	272	65,139	33	18,094

## PENNSYLVANIA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL			
	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	IN RESERVES	DOD	PHS	
ARMY				2			10			12
NAVY				8			35			43
<b>AIR FORCE</b>										
PHS (Comm. Corps)							27			27
VA FULL TIME				13	3		264	3		277
VA PART TIME	1			47			147	1		194
CIVILIAN (Active)	71	8	5,436	201	100	14,923	272	108	20,359	
CIVILIAN (Inactive)										1,413
CIVILIAN (Unknown)										1,107
<b>TOTAL</b>	<b>72</b>	<b>8</b>	<b>5,506</b>	<b>204</b>	<b>100</b>	<b>15,406</b>	<b>276</b>	<b>108</b>	<b>23,432</b>	

NURSES RN	<u>72,610</u>	PODIATRISTS	<u>671</u>
NURSES LPN	<u>24,581</u>	OPTOMETRISTS	<u>1,120</u>
DENTISTS	<u>5,918</u>	PHARMACISTS	<u>5,548</u>
VETERINARIANS	<u>1,116</u>	MEDICAL SCHOOLS	<u>7</u>

M.D. GRADUATES PER YEAR 1,054

## RHODE ISLAND HOSPITALS

Percent Occupancy 86.2

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy	1	66		
Veterans Administration	1	353		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	2	419		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>				
			1	736
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	14	3,417	1	108
For Profit				
Other	2	1,112		
SUBTOTAL	16	4,529	1	108
<b>TOTAL</b>	<b>18</b>	<b>4,948</b>	<b>2</b>	<b>844</b>

RHODE ISLAND  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
ARMY							21		
NAVY				10			10		
AIR FORCE									
PHS (Comm. Corps)							4		
VA FULL TIME				2	1		35	1	37
VA PART TIME				6	1		37	1	43
CIVILIAN (Active)	6	502		23	7	1,309	29	7	1,811
CIVILIAN (Inactive)							132		
CIVILIAN (Unknown)							95		
<b>TOTAL</b>	<b>6</b>	<b>520</b>		<b>25</b>	<b>7</b>	<b>1,406</b>	<b>31</b>	<b>7</b>	<b>2,153</b>

NURSES RN	<u>6,188</u>	PODIATRISTS	<u>53</u>
NURSES LPN	<u>2,285</u>	OPTOMETRISTS	<u>127</u>
DENTISTS	<u>483</u>	PHARMACISTS	<u>544</u>
VETERINARIANS	<u>65</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 64

## SOUTH CAROLINA HOSPITALS

Percent Occupancy 76.1

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	2	61		
Army	1	410		
Navy	2	315		
Veterans Administration	2	984		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	7	1,770		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	33	4,654	4	3,481
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	31	5,635	1	88
For Profit	7	651		
Other	6	398		
SUBTOTAL	44	6,684	1	88
<b>TOTAL</b>	<b>84</b>	<b>13,108</b>	<b>5</b>	<b>3,569</b>

SOUTH CAROLINA  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	IN RESERVES	TOTAL	IN RESERVES	TOTAL			
	DOD	PHS	DOD	PHS	DOD	PHS			
ARMY		19			29				48
NAVY		24			95				119
AIR FORCE		6			40				46
PHS (Comm. Corps)		2			9				11
VA FULL TIME		4			68				72
VA PART TIME	1		11	1	43	2			54
CIVILIAN (Active)	21	1,075	72	28	2,555	93	28	3,630	
CIVILIAN (Inactive)									230
CIVILIAN (Unknown)									216
<b>TOTAL</b>	<b>22</b>	<b>1,141</b>	<b>73</b>	<b>28</b>	<b>2,839</b>	<b>95</b>	<b>28</b>	<b>4,426</b>	

NURSES RN	<u>10,087</u>	PODIATRISTS	<u>16</u>
NURSES LPN	<u>4,622</u>	OPTOMETRISTS	<u>176</u>
DENTISTS	<u>956</u>	PHARMACISTS	<u>1,270</u>
VETERINARIANS	<u>223</u>	MEDICAL SCHOOLS	<u>2</u>

M.D. GRADUATES PER YEAR 143

## SOUTH DAKOTA HOSPITALS

Percent Occupancy 64.1

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	30		
Army				
Navy				
Veterans Administration	3	860		
Indian Health (PHS)	5	171	1	102
Department of Justice				
Other				
SUBTOTAL	9	1,061	1	102
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)	1	44		
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	12	413	1	526
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	44	3,294		
For Profit				
Other	2	115		
SUBTOTAL	46	3,409		
<b>TOTAL</b>	<b>68</b>	<b>4,927</b>	<b>2</b>	<b>628</b>

SOUTH DAKOTA  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY												
NAVY												
AIR FORCE				4				14				18
PHS (Comm. Corps)				1				16				17
VA FULL TIME				7	2			38	2			45
VA PART TIME				5				20				25
CIVILIAN (Active)	4			186	16	6		479	20	6		665
CIVILIAN (Inactive)												53
CIVILIAN (Unknown)												33
<b>TOTAL</b>	<b>4</b>			<b>203</b>	<b>18</b>	<b>6</b>		<b>567</b>	<b>22</b>	<b>6</b>		<b>876</b>

NURSES RN	<u>3,596</u>	PODIATRISTS	<u>12</u>
NURSES LPN	<u>1,184</u>	OPTOMETRISTS	<u>83</u>
DENTISTS	<u>251</u>	PHARMACISTS	<u>362</u>
VETERINARIANS	<u>202</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 36

## TENNESSEE HOSPITALS

Percent Occupancy 77.2

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy	1	80		
Veterans Administration	3	1,877	1	550
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	4	1,963	1	550
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	56	7,448	5	2,971
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	42	11,862	3	97
For Profit	48	4,436	3	253
Other	5	1,009		
SUBTOTAL	95	17,307	6	350
TOTAL	155	26,718	12	3,871

TENNESSEE  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
<b>ARMY</b>												
NAVY				8				26				34
<b>AIR FORCE</b>												
PHS (Comm. Corps)				2				17				19
VA FULL TIME	2			15	7			139	9			154
VA PART TIME	3			33	3			77	6			110
CIVILIAN (Active)	39	6		2,078	111	48		4,515	150	54		6,593
CIVILIAN (Inactive)												326
CIVILIAN (Unknown)												379
<b>TOTAL</b>	<b>44</b>	<b>6</b>		<b>2,136</b>	<b>121</b>	<b>48</b>		<b>4,774</b>	<b>165</b>	<b>54</b>		<b>7,615</b>

NURSES RN	<u>14,776</u>	PODIATRISTS	<u>38</u>
NURSES LPN	<u>11,915</u>	OPTOMETRISTS	<u>356</u>
DENTISTS	<u>1,882</u>	PHARMACISTS	<u>2,113</u>
VETERINARIANS	<u>481</u>	MEDICAL SCHOOLS	<u>3</u>

M.D. GRADUATES PER YEAR 370

## TEXAS HOSPITALS

Percent Occupancy 71.3

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	7	1,385		
Army	3	1,452		
Navy	1	44		
Veterans Administration	9	5,036	1	1,184
Indian Health (PHS)				
Department of Justice	2	19		
Other				
SUBTOTAL	22	7,936	1	1,184
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)	1	118		
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	197	17,759	9	7,393
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	155	28,236		
For Profit	152	15,419	13	1,267
Other	11	1,145		
SUBTOTAL	318	44,800	13	1,267
<b>TOTAL</b>	538	89,600	23	9,844

## TEXAS

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY				178				722				900
NAVY				6				29				35
AIR FORCE				174				590				764
PHS (Comm. Corps)								38				38
VA FULL TIME	1			37	8			358	9			395
VA PART TIME				51	9			162	9			213
CIVILIAN (Active)	106	9		5,660	199	85	13,372	305	94	19,032		
CIVILIAN (Inactive)												1,148
CIVILIAN (Unknown)												1,084
<b>TOTAL</b>	<b>107</b>	<b>9</b>		<b>6,106</b>	<b>216</b>	<b>85</b>	<b>15,271</b>	<b>323</b>	<b>94</b>	<b>23,609</b>		

NURSES RN	<u>39,742</u>	PODIATRISTS	<u>206</u>
NURSES LPN	<u>32,354</u>	OPTOMETRISTS	<u>813</u>
DENTISTS	<u>5,096</u>	PHARMACISTS	<u>4,981</u>
VETERINARIANS	<u>2,005</u>	MEDICAL SCHOOLS	<u>7</u>

M.D. GRADUATES PER YEAR 754

## UTAH HOSPITALS

Percent Occupancy 72.9

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	30		
Army				
Navy				
Veterans Administration	1	454		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	2	484		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	12	633	1	323
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	18	2,922		
For Profit	5	439		
Other	2	243		
SUBTOTAL	25	3,604		
<b>TOTAL</b>	<b>39</b>	<b>4,721</b>	<b>1</b>	<b>323</b>

## UTAH

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY								5				5
NAVY				4				19				23
AIR FORCE								5				5
PHS (Comm. Corps)												
VA FULL TIME				2	1			35	1			37
VA PART TIME	1			13	1			29	2			42
CIVILIAN (Active)	14	1		632	45	24		1,517	59	25		2,149
CIVILIAN (Inactive)												120
CIVILIAN (Unknown)												85
<b>TOTAL</b>	<b>15</b>	<b>1</b>		<b>651</b>	<b>47</b>	<b>24</b>		<b>1,610</b>	<b>62</b>	<b>25</b>		<b>2,466</b>

NURSES RN	<u>4,350</u>	PODIATRISTS	<u>31</u>
NURSES LPN	<u>1,715</u>	OPTOMETRISTS	<u>74</u>
DENTISTS	<u>817</u>	PHARMACISTS	<u>521</u>
VETERINARIANS	<u>141</u>	MEDICAL SCHOOLS	<u>1</u>

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## VERMONT HOSPITALS

Percent Occupancy 74.8

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy				
Veterans Administration	1	216		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	1	216		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<b><u>STATE OR LOCAL GOVERNMENT</u></b>			1	329
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	16	2,196	1	118
For Profit				
Other				
SUBTOTAL	16	2,196	1	118
<b>TOTAL</b>	<b>17</b>	<b>2,412</b>	<b>2</b>	<b>447</b>

## VERMONT

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY												
NAVY												
AIR FORCE												
PHS (Comm. Corps)								6				6
VA FULL TIME				3				26				29
VA PART TIME				4				7				11
CIVILIAN (Active)	3	1		270	20	18		714	23	19		984
CIVILIAN (Inactive)												107
CIVILIAN (Unknown)												56
<b>TOTAL</b>	<b>3</b>	<b>1</b>		<b>277</b>	<b>20</b>	<b>18</b>		<b>753</b>	<b>23</b>	<b>19</b>		<b>1,193</b>

NURSES RN	<u>3,394</u>	PODIATRISTS	<u>6</u>
NURSES LPN	<u>1,279</u>	OPTOMETRISTS	<u>42</u>
DENTISTS	<u>258</u>	PHARMACISTS	<u>202</u>
VETERINARIANS	<u>111</u>	MEDICAL SCHOOLS	<u>1</u>

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## VIRGINIA HOSPITALS

Percent Occupancy 77.5

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	80		
Army	3	279		
Navy	1	535		
Veterans Administration	3	2,046		
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	8	2,940		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)	1	116		
<b><u>STATE OR LOCAL GOVERNMENT</u></b>				
	6	2,426	6	4,881
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	76	15,062	1	162
For Profit	19	3,160	9	909
Other	6	1,260		
SUBTOTAL	101	19,482	10	1,071
TOTAL	116	24,964	16	5,952

## VIRGINIA

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY				47				198				245
NAVY				45				283				328
AIR FORCE				12				30				42
PHS (Comm. Corps)				1				16				17
VA FULL TIME	1			17	2			156	3			173
VA PART TIME	2			26				42	2			68
CIVILIAN (Active)	46	12	2,272	89	53	5,825	135	65	8,097			
CIVILIAN (Inactive)												634
CIVILIAN (Unknown)												495
<b>TOTAL</b>	<b>49</b>	<b>12</b>	<b>2,420</b>	<b>91</b>	<b>53</b>	<b>6,550</b>	<b>140</b>	<b>65</b>	<b>10,099</b>			

NURSES RN	<u>21,648</u>	PODIATRISTS	<u>71</u>
NURSES LPN	<u>8,974</u>	OPTOMETRISTS	<u>319</u>
DENTISTS	<u>2,227</u>	PHARMACISTS	<u>2,056</u>
VETERINARIANS	<u>621</u>	MEDICAL SCHOOLS	<u>3</u>

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## WASHINGTON HOSPITALS

Percent Occupancy 70.8

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force	1	50		
Army	1	386		
Navy	2	102		
Veterans Administration	4	970	1	407
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	8	1,508	1	407
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)	1	152		
<b><u>STATE OR LOCAL GOVERNMENT</u></b>	40	2,724	2	1,320
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	59	8,690		
For Profit	7	561	2	150
Other	2	120		
SUBTOTAL	68	9,371	2	150
<b>TOTAL</b>	117	13,755	5	1,877

## WASHINGTON

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	IN RESERVES	TOTAL	IN RESERVES	TOTAL			
	DOD	PHS	DOD	PHS	DOD	PHS			
ARMY		48			244				292
NAVY		16			63				79
AIR FORCE		5			31				36
PHS (Comm. Corps)		3			41				44
VA FULL TIME	1		15	2	111	3			129
VA PART TIME			3		20				23
CIVILIAN (Active)	46	6	1,707	100	97	4,797	146	103	6,650
CIVILIAN (Inactive)									556
CIVILIAN (Unknown)									402
<b>TOTAL</b>	<b>47</b>	<b>6</b>	<b>1,797</b>	<b>102</b>	<b>97</b>	<b>5,307</b>	<b>149</b>	<b>103</b>	<b>8,211</b>

NURSES RN	<u>20,211</u>	PODIATRISTS	<u>64</u>
NURSES LPN	<u>6,402</u>	OPTOMETRISTS	<u>382</u>
DENTISTS	<u>2,391</u>	PHARMACISTS	<u>2,034</u>
VETERINARIANS	<u>720</u>	MEDICAL SCHOOLS	<u>1</u>

M.D. GRADUATES PER YEAR 131

## WEST VIRGINIA HOSPITALS

Percent Occupancy 77.2

	General		Psychiatric	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy				
Veterans Administration	4	1,080		
Indian Health (PHS)				
Department of Justice	1	25		
Other				
SUBTOTAL	5	1,105		
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	20	2,744	3	1,255
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	31	6,179	1	54
For Profit	14	1,214		
Other	4	961		
SUBTOTAL	49	8,354	1	54
<b>TOTAL</b>	<b>74</b>	<b>12,203</b>	<b>4</b>	<b>1,309</b>

WEST VIRGINIA  
SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL		
	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS	IN RESERVES	TOTAL	DOD PHS
<b>ARMY</b>									
NAVY									
AIR FORCE									
PHS (Comm. Corps)							21		21
VA FULL TIME				16			76		92
VA PART TIME				6			35		41
CIVILIAN (Active)	4	3	721	20	15	1,608	24	18	2,329
CIVILIAN (Inactive)									143
CIVILIAN (Unknown)									174
<b>TOTAL</b>	<b>4</b>	<b>3</b>	<b>743</b>	<b>20</b>	<b>15</b>	<b>1,740</b>	<b>24</b>	<b>18</b>	<b>2,800</b>

NURSES RN	<u>7,416</u>	PODIATRISTS	<u>36</u>
NURSES LPN	<u>3,514</u>	OPTOMETRISTS	<u>131</u>
DENTISTS	<u>657</u>	PHARMACISTS	<u>656</u>
VETERINARIANS	<u>120</u>	MEDICAL SCHOOLS	<u>2</u>

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## WISCONSIN HOSPITALS

Percent Occupancy 73.5

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<b><u>FEDERAL GOVERNMENT</u></b>				
Air Force				
Army				
Navy				
Veterans Administration	2	1,130	1	898
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	2	1,130	1	898
<b><u>FORMER FEDERAL (PHS)</u></b>				
(Now State or Local Government)				
STATE OR LOCAL GOVERNMENT	13	1,872	8	2,422
<b><u>NON GOVERNMENT</u></b>				
Not for Profit	129	21,296	3	271
For Profit			1	37
Other	4	275		
SUBTOTAL	133	21,571	4	308
TOTAL	148	24,573	13	3,628

## WISCONSIN

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY												
NAVY												
AIR FORCE												
PHS (Comm. Corps)				1				14				15
VA FULL TIME				7		8		126		8		133
VA PART TIME	2			63	1			82	3			145
CIVILIAN (Active)	4			1,844	31			4,940	35			6,784
CIVILIAN (Inactive)												428
CIVILIAN (Unknown)												321
<b>TOTAL</b>	<b>2</b>	<b>4</b>		<b>1,915</b>	<b>9</b>	<b>31</b>		<b>5,162</b>	<b>11</b>	<b>35</b>		<b>7,826</b>

NURSES RN	<u>23,623</u>	PODIATRISTS	<u>121</u>
NURSES LPN	<u>7,952</u>	OPTOMETRISTS	<u>436</u>
DENTISTS	<u>2,530</u>	PHARMACISTS	<u>2,178</u>
VETERINARIANS	<u>802</u>	MEDICAL SCHOOLS	<u>2</u>

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## WYOMING HOSPITALS

Percent Occupancy 62.2

	General	Psychiatric		
	Number Hospitals	Number Beds	Number Hospitals	Number Beds
<u>FEDERAL GOVERNMENT</u>				
Air Force	1	30		
Army				
Navy				
Veterans Administration	1	176	1	295
Indian Health (PHS)				
Department of Justice				
Other				
SUBTOTAL	2	206	1	295
<u>FORMER FEDERAL (PHS)</u>				
(Now State or Local Government)				
<u>STATE OR LOCAL GOVERNMENT</u>	17	1,148	1	350
<u>NON GOVERNMENT</u>				
Not for Profit	10	485		
For Profit				
Other				
SUBTOTAL	10	485	1	350
<u>TOTAL</u>	29	1,839	2	645

## WYOMING

## SUMMARY OF HEALTH MANPOWER

	SURGEONS			NON-SURGEONS			TOTAL					
	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL	IN RESERVES	DOD	PHS	TOTAL
ARMY												
NAVY												
AIR FORCE				4				10				14
PHS (Comm. Corps)								7				7
VA FULL TIME				3	3			20	3			23
VA PART TIME								2				2
CIVILIAN (Active)	2			139	11	3		315	13	3		454
CIVILIAN (Inactive)												33
CIVILIAN (Unknown)												23
<b>TOTAL</b>	<b>2</b>			<b>146</b>	<b>14</b>	<b>3</b>		<b>354</b>	<b>16</b>	<b>3</b>		<b>556</b>

NURSES RN	<u>1,824</u>	PODIATRISTS	<u>6</u>
NURSES LPN	<u>486</u>	OPTOMETRISTS	<u>37</u>
DENTISTS	<u>203</u>	PHARMACISTS	<u>215</u>
VETERINARIANS	<u>113</u>	MEDICAL SCHOOLS	<u>0</u>

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